

A Socialism for the Twenty-First Century

*Towards the 'Full and Free Development
of Every Individual'*

By

Tony Smith



BRILL

LEIDEN | BOSTON

The Library of Congress Cataloging-in-Publication Data is available online at <https://catalog.loc.gov>
LC record available at <https://lcn.loc.gov/2025025446>

Typeface for the Latin, Greek, and Cyrillic scripts: "Brill". See and download: brill.com/brill-typeface.

ISSN 1570-1522

ISBN 978-90-04-73812-6 (hardback)

ISBN 978-90-04-73815-7 (e-book)

DOI 10.1163/9789004738157

Copyright 2025 by Tony Smith. Published by Koninklijke Brill BV, Plantijnstraat 2, 2321 JC Leiden, The Netherlands.

Koninklijke Brill BV incorporates the imprints Brill, Brill Nijhoff, Brill Schöningh, Brill Fink, Brill mentis, Brill Wageningen Academic, Vandenhoeck & Ruprecht, Böhlau and V&R unipress.

Koninklijke Brill BV reserves the right to protect this publication against unauthorized use. Requests for re-use and/or translations must be addressed to Koninklijke Brill BV via brill.com or copyright.com.

For more information: info@brill.com.

This book is printed on acid-free paper and produced in a sustainable manner.

... Life is short and the world
is at least half terrible, and for every kind
stranger, there is one who would break you,
though I keep this from my children. I am trying
to sell them the world. Any decent realtor,
walking you through a real shithole, chirps on
about good bones: This place could be beautiful,
right? You could make this place beautiful.

from 'Good Bones', MAGGIE SMITH



Contents

Preface XI

List of Figures XII

1	Introduction	1
1	Nine Claims	1
2	Summary of the Book	23
2	Capitalism (and Capital)	29
1	The 'Standard View'	30
2	Capital: A Macro-monetary Totality	43
3	The Case against Capitalism: Essential Determinations and Systematic Tendencies	54
4	Conclusion	77
3	The Present Moment of World History	79
1	Technological Change and Valorisation in Contemporary Capitalism	79
2	From a 'Golden Age' to a Global Slump	88
3	Neoliberalism	92
4	Conclusion	112
4	A Socialist Constitution	120
1	Marx's Ruling Principle	121
2	'Free Development' (1): Self-Governance without Domination	126
3	'Free Development' (2): The Freedom of Particular Social Individuals	147
4	'Full Development': Universal and Particular Needs	150
5	Two Solidarity Constraints	158
6	Further Principles	161
7	Conclusion	165
5	The Local Level (1): The Democratic Determination of Social Needs and Production Proposals	168
1	The Social Determination of Social Needs	171
2	Two Notes	190
3	The Investment Requests of Production Collectives	197
4	The Estimation of Costs	201
5	Retained Earnings and Market Socialism	227
6	Conclusion	231

6	The Local Level (2): Social Investment, Social Production, and Social Exchange	234
1	The Allocation of Social Investment	234
2	The Process of Production	253
3	The Acquisition of Consumption Goods	275
4	Conclusion	281
7	The Role of 'Money' in Socialist Accounting	284
1	Some Questions	284
2	A Note on Money in Capitalism	287
3	Some Relevant Determinations of the Socialist Alternative	288
4	Conclusion	303
8	Regional Networks of Production and Exchange	313
1	Some General Remarks on Regional Production	313
2	Regional Production for Social Needs and the Solidarity Constraints	319
3	Regional Production Networks and the Coordination of Social Investments	329
4	The Regional Innovation System	335
5	Conclusion	338
9	Socialism on the National and International Levels	340
1	The Transition to the National and International Levels	340
2	Production for Social Needs on the National and International Levels	344
3	The Social Transaction Centre	353
4	A Note on the Implications of the First Solidarity Constraint on the International Level	356
5	National and International Democratic Assemblies	361
6	National and International Agencies	367
7	The National and International Innovation Systems	374
8	The Fraught Relationship with the Remnants of Capitalism	388
9	Conclusion	395
10	Incentives and Efficiency in the Socialist Model	396
1	Incentive Objections	396
2	Efficiency Objections	409
3	Conclusion	428

11	Socialism and the ‘Realm of Freedom’	432
1	The Realm of Freedom in Capitalism and Socialism: Some Contrasts	432
2	Commons-Based Peer Production in Contemporary Capitalism	438
3	The Realm of Necessity and the Realm of Freedom: A Dialectical Unity-in-Difference	454
4	An Emancipatory Promise Fulfilled: Commons-Based Peer Production and the Socialist Project	457
5	Conclusion	460
12	Conclusion	462
1	Why Socialism Is Needed	462
2	The Republican Socialist Model: A Summary	473
3	How Do We Get There from Here?	487
	Appendix	497
	Bibliography	499
	Index	513

Preface

This has not been an easy book to write. I am very grateful to all those who have read and commented on earlier drafts: Bob Antonio, Aaron Benanav, Colter Cleary, Howard Engelskirchen, Fred Evans, Nate Holdren, Rob Hunter, the much missed Mike Lebowitz, Paul Mattick, Andrei Migunov, Dimitris Milonakis, Fred Moseley, Patrick Murray, José Monserrat Neto, Jeanne Schuler, David Schweickart, Igor Shoikhedbrod, Alex Stoner, Michael Thompson, Sam v.O., Matt Vidal, Richard Westra, Bjorn Westergard, and Ryan Wishart. They are most emphatically not responsible for the shortcomings of the work that follows, while all have contributed to making it better than it might otherwise have been. The three external reviewers of the original submission provided the most extensive and helpful feedback from blind reviewers I have ever received. I hope the improvements made as a result justify to at least some extent the evident time, effort, and care they put into their reports. I am very grateful as well to Betsy Bowman, Sebastian Budgen, Dan Krier, Joe Kupfer, Bob Stone, and (especially and always) Rebecca Burke for their encouragement to persevere. Special thanks are due to Geert Reuten, whose extensive critical commentaries on drafts of every chapter were as appreciated as they were (and remain) challenging.

The book is dedicated to Bridgit, Conor, Zac, and all those in the next generations trying to make this place a bit more beautiful.

Figures

- 1 Some forms of republicanism 3
- 2 Capitalism in a world historical perspective 33
- 3 Capital's reproduction and the reproduction of the capital/wage labour relationship 63
- 4 Global R&D spending 84
- 5 The process of determining social needs 178
- 6 Production for social needs 202
- 7 The allocation of social investment 251
- 8 An overview of investment funding and income flows in production for social needs 279
- 9 Flows of 'money' in republican socialism 304
- 10 Regional production to address regional social needs 328
- 11 The system of Social Investment Centres and the Social Transaction Centre 349
- 12 Planning cycles 351
- 13 Research Centres in the model 377

Introduction

Nine major claims are at stake in the present work. Some will be defended at length later. Others are background assumptions argued for in cited works. The claims will be introduced in this first chapter. An extensive excursion on different forms of republicanism will begin in the discussion of the second claim and picked up again in the fifth claim. The chapter concludes with brief summaries of the chapters to follow.

1 Nine Claims

1. *Something has gone very wrong in contemporary capitalism.* This is perhaps the least disputable of the claims. Few proclaim all is well today.

For right-wing ‘populists’ the root cause of our woes is the ‘other’. Or rather ‘others’, since those embracing the right-wing politics of victimhood complain of being assaulted on a variety of fronts. The list of enemies is extensive: belittling liberal elites, the godless imposing their woke secular values, teachers undermining patriotic reverence, immigrants out to replace ‘true’ citizens, foreign nations taking unfair advantage of us, humourless feminists, practitioners of ‘deviant’ life styles, bureaucrats happy to use the powers of the ‘deep state’ to aid any or all of the above, and so on and on. In this one respect the creativity of the right is boundless.

It is of enormous practical importance that reactionary social forces be defeated politically. Theoretically, however, their views are as much ‘beneath all criticism’ as the defences of the ancient regime in Marx’s day.¹

The most honest and intellectually serious organic intellectuals of contemporary capitalism have a much deeper and more accurate sense of what has gone wrong. Martin Wolf, the chief economics commentator for the *Financial Times*, is a good example. Large sections of his recent work *The Crisis of Democratic Capitalism* would not be out of place in a leftist critique of globalisation, financialisation, technological change, and economic concentration. Wolf documents rising inequality, declining social mobility, an unprecedented explosion of indebtedness, pervasive tax evasion, the blatant corruption of

¹ Marx 1976, p. 739. See Krier 2017.

powerful corporations and the superrich, increasingly predatory rent extraction, the dominant role of the wealthy in shaping public policy, a powerful plutocracy actively fostering racial, ethnic and cultural splits among the mass of the population to further its political agenda, and the utter failure to respond to global environmental challenges with anything approaching the required urgency and effectiveness.

Many other prominent theorists share Wolf's concerns. Nouriel Roubini aptly titles his most recent work *Megathreats*. Its chapter headings provide a good sense of the threats he has in mind. For decades we have been caught in an 'Easy Money Trap', setting off a 'Boom-Bust Cycle' that has finally reached its limit, making 'The Mother of All Debt Crises' now all but unavoidable. 'The Coming Great Stagflation' awaits, along with 'Currency Meltdowns and Financial Instability', and, most troubling of all, the danger of 'An Uninhabitable Planet'. Appealing to the same phenomena the historian Adam Tooze has made 'polycrisis' a familiar term among those seriously attempting to come to terms with our moment in history.²

2. Serious problems demand serious analyses and serious responses. A range of mainstream positions meet these criteria. They can be referred to as variants of *liberal democratic republicanism*. The second major claim of this work is that *liberal democratic republicanism fails to provide an adequate theoretical framework for comprehending capitalism and responding to its social pathologies*. Given that the present work defends a different form of republicanism, it makes sense to consider this claim at some length.

No less than other terms in social theory, each of the three terms in 'liberal democratic republicanism' has been employed in different and incompatible ways.³ In the present context, 'republicanism' will be taken in a very general sense, referring to two claims. First, sovereign ('constituent') power ultimately lies with 'the people' in some sense of *that* ambiguous term (or, better, the 'ensemble of social individuals in their social interactions') as opposed to a king

2 As the term itself suggests, for Tooze agrees with Wolf and Roubini that contemporary capitalist societies do not confront a single crisis, but rather a wide range of crises. In conjunction they are sufficiently powerful to call into question our collective sense of reality:

A problem becomes a crisis when it challenges our ability to cope and thus threatens our identity. In the polycrisis the shocks are disparate, but they interact so that the whole is even more overwhelming than the sum of the parts. At times one feels as if one is losing one's sense of reality. ... Things that would once have seemed fanciful are now facts (Tooze 2022).

3 Some political theorists, for example, have often defined 'republicanism' and 'liberalism' as opposed positions. In the sense of the terms used here, they aren't. See the discussion in 2.1.5 below.

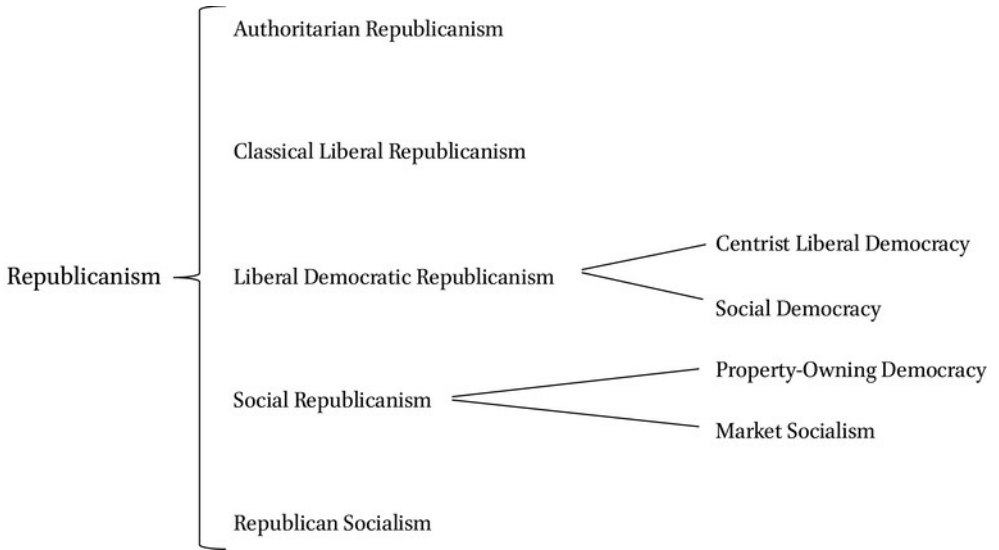


FIGURE 1 Some forms of republicanism

or natural aristocratic elite.⁴ Second, individuals have rights to live the sort of lives they choose to lead, free from the domination of others. Republicanism in this sense has taken a variety of forms in modern political thought. Figure 1 provides an overview of the forms of most interest in the present context.⁵

The *classical liberal* republicanism of Locke, as opposed to the *authoritarian* republicanism defended by Hobbes, seeks to guard against the delegated (‘constituted’) power of governments from being used to dominate the society from which that power has been delegated. The dispersal of political power across distinct branches of government is defended on these grounds, with legislative power located in a representative body. Constitutional guarantees of individual rights are also seen as essential protections against domination, including rights to freedom of speech, freedom of assembly, freedom of religion, the freedom to own property, and the freedom to make contracts.

4 ‘Instituting the people as the foundational source of the republic’s legitimacy remains republicanism’s most subversive and revolutionary commitment’ (Leipold, Nabulsi, and White 2020, p. 3). ‘Republicanism’ in this context clearly has little to do with the Republican political party in the United States.

5 The following discussion is not to be taken as a comprehensive examination of republicanism in Western political thought. The goal here is to introduce salient features of Marx’s republican socialism by means of a comparison and contrast with significant other forms of republicanism defended in modern political thought.

The *democratic* component of 'liberal democratic republicanism' sets its adherents apart from both authoritarian and classical liberal republicans. For them, 'the people' holding sovereign power in principle incorporates *all* members of the political community, regardless of class, race, gender, ethnicity, or any other arbitrary distinction. This equality of political citizenship also implies that Kant's conception of the republican principle of social freedom – 'living under laws one has made for oneself' – is not to be taken as Kant himself took it. Kant was content with 'rational' agreement after the fact to laws made by a legislative body selected in elections with very restricted suffrage, and with laws enforced by a similarly inadequately accountable executive branch. For democrats, in contrast, self-governance requires that those holding political powers are voted into office (and can be voted out) in elections characterised by universal suffrage. Further, merely formal equality of political citizenship is not sufficient. Individuals must stand as equals in the social world, all having a fair opportunity to freely develop and exercise their essential human capabilities. This requires universal rights to education, housing, medical care, unemployment insurance, and so on.

Adherents of liberal democratic republicanism insist that capitalist market societies in principle institutionalise important forms of freedom. As long as the rights of others to do the same are respected, individuals have the freedom to decide for themselves what ends to pursue, what particular skills to develop, what occupations to seek employment exercising those skills, what particular goods to acquire to lead the sorts of lives they have chosen to lead, how much of their income they save, how to invest their savings, and so on. While there are many examples of capitalist market societies that have denied their members such rights, for liberal democrats (like Wolf, Roubini, and Tooze) that is due to contingent abuses, rather than inherent features of such societies. In this significant respect they are quite unlike economic systems based on slavery, feudalism, or bureaucratic command, where the denial of such freedoms is a defining feature.

Liberal democratic republican theorists also affirm capitalist market societies because of their productive dynamism. Market competition and the lure of market rewards provide producers with a strong incentive to produce products people want to acquire, and to offer them at a price that potential purchasers are willing to pay. The direct result is a rate of product and process innovations unsurpassed in human history. The indirect result is an unsurpassed level of material prosperity, enabling longer and better lives. In their view, no system is capable of furthering human flourishing more.

Advocates of the position being considered, however, are not uncritical cheerleaders of capitalism. They are well aware that capitalist market societ-

ies can generate a ‘polycrisis’ of profound ‘megathreats’, including threats to the most basic liberal democratic republican values. They insist, however, that if the proper background conditions are in place, any tendencies for capitalist markets to generate unacceptable results can be neutralised.

Consider, for example, Martin Wolf’s call for enhanced investment, insurance, and innovation:

If we are to improve the performance of our economies and meet the planetary challenges, we need to raise investment across the world, and not just in historically successful economies. Second, social insurance against uninsurable risks, such as the loss of a job, the decline in one’s industry or failing health, will help reduce insecurity. Third, we need innovation. But the most important ones may now be social and political. The last period of such renewal was in the middle of the 20th century. We cannot wait for a second period of catastrophe before we attempt renewal once again.⁶

None of these objectives can be left to the marketplace. Public policies must take the lead. With respect to the climate crisis, for example,

Broadly speaking, five policy changes do still need to be made, or strengthened: increase investment in scientific research; increase subsidisation of the application of new technologies, with a view to accelerating learning-by-doing in each, as well as speeding up investment in complementary technologies; cease subsidisation of fossil fuels, which amounted to \$700bn in 2021, other than in carbon capture and storage; introduce carbon pricing in one of several possible ways, perhaps by preventing prospective declines in energy prices from working their way fully into the market; and de-risk finance especially in developing countries.⁷

Wolf laments that policies such as these have either not been implemented at all or are not being implemented at anything close to the rate needed to avoid unimaginable global disruptions and suffering. It is not yet too late, in his view.

The main divergence among liberal democratic republicans concerns the scale of government policies affecting economic activities, whether in the form of regulative restraints (for example, anti-trust legislation aiming at preventing

6 Wolf 2022c.

7 Wolf 2022a.

excessive concentrations of economic power), subsidies, or addressing social needs markets fail to address. On one end of the spectrum there are *centrist liberal democrats* like Martin Wolf who strongly prefer policies making extensive use of market incentives (such as carbon taxes, for example). Well to their left are *social democrats* (or *liberal egalitarians*) calling for extensive state funding for a 'Green New Deal', a universal jobs programme, a guaranteed basic income. In the United States this position has been most influentially defended by Bernie Sanders.

Social democracy is often referred to as 'socialism' by its defenders and critics. At the end of the day, however, social democrats no more wish to break from market capitalism than economists writing in the *Financial Times*. No less than centrist liberal democrats, their project is to institute an acceptable form of market capitalism, defined from the standpoint of liberal democratic republicanism.⁸ Both agree on the need to mobilise the political forces required to protect the aspects of contemporary capitalist worth protecting from regressive agendas and to further the still unmet promises of liberal democratic republicanism.

I regard the faith that an acceptable form of capitalism can be implemented as misplaced as the Aztec faith that the hearts of conquered foes will provide nourishment for the sun. The one leads to needless suffering and death as inexorably as the other. It is not that people of sound judgement, good policies, and moral principles do not exist in capitalism. Many do. Sometimes they even attain positions of power, sincerely intending to use their power for good. But this is as irrelevant to an assessment of capitalist market societies as the fact that not all slave owners were moral monsters is irrelevant to assessing slavery. What ultimately matters in both cases are the essential structures and dominant tendencies working against what Marx termed universal human emancipation. The liberal democratic republicanism position, in other words, is inherently incoherent. The position grants the capitalist class a power that undermines its supposed goals, in effect making profession of those goals empty verbiage:

* When a relative few own and control the society's productive resources, it is simply impossible for all to stand as an equal in the social world, even if all are granted the same status as legal subjects. When the means of production are owned and controlled by others, needed goods and services take the form of commodities owned by others. Those lacking extensive monetary resources

⁸ Accordingly, I shall use 'socialism' to refer to positions attempting to offer a true alternative to market capitalism.

are in effect forced to sell their capacity to act, their labour power, to some capitalist enterprise or other for a period of time. This is a form of social coercion.

* Those who own for a time others' capacity to act can set them to work on instruments and materials of the former's choosing, in ways of their choosing, for projects of their choosing. This is a form of social domination. The capital/wage labour relationship rules out self-governance in the social space where most adults in capitalist societies spend most of their working lives, the workplace. Managers exercising authority in the workplace are ultimately agents of the investor class, accountable to them and not to those subject to their authority. (Granting representatives of workers a minority of seats on Boards of Directors does not fundamentally change this state of affairs.)

* The liberal democratic republican state is the social space where self-governance is supposedly established. But the concentrated economic power of the capitalist class grants its members a political power undermining the self-governance of the political community as a whole. Their wildly disproportionate political power often takes a direct form, where those who own capital effectively control (and in a not totally metaphorical sense, own) state officials as well, through corrupt pay-outs, private funding of campaigns, the revolving door where retired state officials are promised lucrative positions when they enter the private sector, the capture of regulatory agencies, the fear of attack by privately owned media, and so on. There are numerous other cases where state agents operate as the de facto representatives of the general interests of owners/controllers of capital (or a particular faction of capital) without any direct control having to be exerted by the latter over the former. This can be due to shared cultural ties, shared educational backgrounds, shared ideological beliefs, or the hope of future lucrative employment in the private sector. Or there may be ruling blocs incorporating various non-capitalist group interests but dominated by hegemonic factions of capital.⁹

* Despite all this, reforms meeting with the approval of liberal democratic republicans may on occasion still be successfully pursued with the support of important factions of capitalists. These factions of capitalists may support reforms believing they are compatible with their own profit-seeking, or because they think they are necessary to maintain social peace. Gaining the support of these factions, however, generally requires that the reforms are significantly weakened and distorted. Successful reforms are also precarious, in danger of being reversed if economic circumstances change and policies previously considered compatible with a satisfactory level of profits are no longer

9 These themes are explored by Gramsci in great depth in his *Prison Notebooks*.

so considered. Or social movements supporting the reforms may lose political strength (and strength is difficult to maintain when those benefitting from the reforms are widely dispersed).

* State officials must be concerned with the legitimacy of the system as a whole. This may sometimes require taking into account the interests of other social groups besides those owning or controlling a critical mass of capital. Sometimes the former might even be granted priority over the preferences of leading factions of capitalists. In democratic capitalism the need for governments to win elections creates a political space for the sort of reforms centrist liberal democrats and social democrats to their left call for – up to a point. Past that point, the capitalist class retains powerful weapons to close that space. Reforms that would significantly weaken or remove structural coercion in labour markets and domination in the workplace push beyond that point. They threaten to leave capitalists without a compliant labour force and they threaten to erode their confidence that their investments will be profitable.

Private ownership and control over society's productive resources grant their holders the social power to respond to such threats by throwing the economy into chaos by means of capital flight or capital strikes. Sooner rather than later the reforms would either have to be rescinded or the veto power of capitalists over public policy would have to be taken away. Either path undermines liberal democratic republicanism, the first by conceding that the property and production relations of capitalism are incompatible with its defining commitments, the second by overcoming the social relations of capitalism that liberal democratic republicanism affirms. (The discussion of other, perhaps more coherent, forms of republicanism begins in #5 below.)

The history of capitalism is a depressing story of long periods of increasingly blatant inequalities, structural coercion, domination, and exploitation, periodically interrupted by progressive (to varying degrees) social movements struggling for reforms intended to make the emancipatory promises of liberal democratic republican constitutions less of a cruel joke. Again and again reforms these movements were able to implement proved to be distorted by loopholes allowing new forms of inequalities, structural coercion, domination, and exploitation to emerge. Or they were reversed when economic conditions or the balance of social forces changed. Or they improved some conditions for some people but could not be deepened and generalised to the point where *all* would stand as equals in a society, making collective self-governance a material actuality.¹⁰

10 An excellent account of how the history of the United States from its founding until today

3. The problems with centrist liberal democracy and social democracy just mentioned have to do with the defining property and production relations of capitalism in general, considered more closely in Chapter 2. A third thesis defended in the present work is that they are intensified today due to a development of immense but still very much underappreciated significance: *the very technological dynamism that has been a source of strength for capitalist market societies now tends to undermine the economic dynamism of those societies*. This new state of affairs is, I believe, manifested in the social pathologies in contemporary capitalism that liberal democratic republicans rightly lament. However, it provides another compelling reason to doubt that even the most ambitious reformist agenda could overcome them. I argue in Chapter 3 that this very contested conclusion can be derived from premises that are all but universally accepted.

4. If even the most progressive agendas for overcoming the challenges of our moment in world history within a capitalist framework are inadequate, then it follows that emancipatory hopes must be placed in a post-capitalist alternative framework. For much of the twentieth century, millions of people across the globe held that the ‘state socialism’ of the Soviet Union had established a true advance over market capitalism. Today, many assert that China’s variant of state-directed socialism offers the best hope for addressing the immense challenges humanity faces.

The accomplishments of the USSR warrant respect, not least the defeat of fascism in World War II. The rate of China’s advance to the scientific and technological frontier in key industries has been astounding and unprecedented. Nonetheless, another underlying claim of this book is that *no form of so-called state socialism offers an acceptable alternative to capitalist market societies*.¹¹

In some variants of ‘state socialism’, a ruling bureaucratic stratum attempts to centrally plan the economy in detail. Familiar criticisms of this form of social production have the ring of truth, in my view. Local managers of production enterprises tend to overstate the inputs they need and understate the outputs their enterprises are capable of producing. Attempts by central planners to adjust for the resulting distortions of information introduce yet more

exhibits this depressing pattern of reform and reaction is found in Fishkin and Forbath 2022.

11 I do not wish to rehearse the debates regarding the proper categorisation of these regimes. I do not find the designation ‘state capitalism’ that many Marxian theorists use, or the ‘authoritarian capitalism’ that Martin Wolf and other mainstream commentators prefer, convincing. In order to leave the question open here I shall regularly refer to ‘state socialism’ with scare quotes or to ‘so-called state socialism’.

distortions. Lower-level agents have disincentives to innovate, since when an innovation proves successful, those above them in the bureaucratic hierarchy get the credit, while if it fails, they are the ones blamed. Ordinary workers have little incentive to exert effort, having little say in what is produced or how it is produced. They also have little to fear from low levels of production, given a general lack of hard budget constraints in central planning. When central planners prioritise investment in machinery or weapons systems, ordinary households suffer from a systematic underproduction of consumer goods, wasting their lives in long queues and making do with goods of poor quality.¹²

In a second variant the ruling bureaucratic stratum attempts to unleash the power of markets to spur economic growth and catching up to the technological frontier. Markets are kept in check through retaining state ownership of a significant share of enterprises, the power to direct investments to specific sectors and regions through a combination of direct instructions to state banks and indirect subsidies and regulations, and similar measures. The Chinese Communist Party, wishing to avoid the stagnation afflicting the Soviet Union in its last decades, also implemented an extremely ambitious programme of attracting private foreign direct investment while retaining continued control of the commanding heights of both the industrial and financial sectors of the economy.

In the view of its advocates, the productive forces in China and other countries ruled by communist parties following similar strategies are not advanced enough to affirm that socialism has been fully attained. But in their view these countries are ‘predominantly socialist’ due to the ‘quantitative and qualitative pre-eminence of State ownership; public finance; plans and projects; [and the] power of the Party’. Advocates stress the need to extend ‘the very definition of what constitutes the essence of a socialist economic system well beyond the State ownership of the main means of production, to include a much wider range of domains that can be jointly termed “State capabilities”’.¹³ Extending the capabilities of the Communist Party in these countries is in their view humanity’s best hope for a global order that does not condemn billions to material deprivation and the species as a whole to environmental catastrophe.

Insofar as this variant of ‘state socialism’ makes extensive use of markets, much of the critical assessment of market socialism below is relevant. For now, however, the question is whether any variant of ‘state socialism’ guided by a

12 See Kornai 1992, Arthur 2002.

13 Gabriele and Jabbour 2022, pp. 116, 122.

powerful and unaccountable ruling stratum provides an adequate alternative to capitalist market societies.¹⁴ Two central themes in Marx's writings suggest the answer is no.

In his early critique of Hegel's *Philosophy of Right*, Marx mercilessly mocked Hegel's categorisation of an unaccountable state bureaucracy as a 'universal class' acting on the basis of privileged knowledge of the good of the community. Such knowledge is not in the private possession of any particular group, no matter how much data its members might be able to collect. Articulating the good of the community as a whole needs to be an ongoing collective process involving the community as a whole. When a state bureaucracy short-circuits that process, asserting its power to proclaim the content of the universal good, it becomes an alien power over and against the society in whose name it rules. It may respond to social needs as it attempts to maintain social order and its own legitimacy. But its main social purpose will invariably be to protect and expand its own power.¹⁵

Marx's later writings establish that this critical analysis was not limited to a critique of the Prussian bureaucracy of his youth and Hegel's idealised treatment of it. Marx's strong endorsement of the Paris Commune, for example, stressed how

Instead of continuing to be the agent of the Central Government, the police was at once stripped of its political attributes, and turned into the responsible and at all times revocable agent of the Commune. So were the officials of all other branches of the Administration. From the members of the Commune downwards, the public service had to be done at *workman's wages*. The vested interests and the representation allowances of the high dignitaries of State disappeared along with the high dignitaries themselves. Public functions ceased to be the private property of the tools of the Central Government.¹⁶

A form of social organisation centring on a bureaucratic hierarchy unaccountable to those subject to its dictates is clearly not a form of social organisation

14 The Chinese Communist Party controls 'the career advancement of all senior personnel in all regulatory agencies, all state-owned enterprises (SOEs), and virtually all major financial institutions SOEs, and senior Party positions in all but the smallest non-SOE enterprises' (Fan et al. 2011, pp. 1–2, quoted by Gabriele and Jabbour 2022, p. 160). All of that is apparently compatible for them with the 'very definition of what constitutes the essence of a socialist economic system'.

15 The reified language used here is, I think, appropriate to the reified reality.

16 Marx 1986a, p. 331.

Marx would endorse, no matter how much those holding leading positions in the hierarchy profess socialist intentions.¹⁷

A second, closely related idea Marx insisted upon throughout his life is that any true alternative to capitalist market societies must be based on the self-emancipation of the working class.¹⁸ The imposition of a detailed central plan decided by others reduces workers to the status of objects. So does a plan incorporating a turn to the market.¹⁹ If liberal democratic republicanism is rightly rejected for its failure to address the domination of capitalists in the workplace, an alternative that allows analogous forms of domination cannot be affirmed.

These two points are, of course, two sides of the same coin. The bigger the role of a state bureaucracy in social life, the less space for the self-emancipation of working classes.²⁰

-
- 17 'The term socialist-oriented SEF [Socioeconomic Formation] refers broadly to a country run in a rather stable context by a political force (or coalition) declaring officially to be engaged in steering a process aimed at establishing, strengthening, or improving and further developing a socialist socioeconomic system' (Gabriele and Jabbour 2022, p. 102). The ruling political forces in China have declared officially that they are engaged in such 'steering'. Therefore, we are supposed to conclude, China is by definition a 'socialist-oriented social formation'. The problem here is obvious enough. What political elites officially declare they are doing does not necessarily correspond to what they in fact do. State officials in Prussia, after all, agreed with Hegel that they were directed towards the universal good of the community. Declaring it did not make it so.
- 18 Marx 1989. For Luxemburg, 'The essence of socialist society consists in the fact that the great laboring mass ceases to be a dominated mass, but rather, makes the entire political and economic life its own life and gives that life a conscious, free, and autonomous direction. ... The naked decrees of socialisation by the highest revolutionary authorities are by themselves empty phrases. Only the working class, through its own activity, can make the word flesh ... with the creation of its own permanent representative organs. ... All [the] socialist civic virtues, together with the knowledge and skills necessary to direct socialist enterprises, can be won by the mass of workers only through their own activity, their own experience. ... The emancipation of the working class must be the work of the working class itself' (Luxemburg 1971b, p. 369).
- 19 The Chinese regime put its working classes at the disposal of foreign investors and domestic capitalists, where they have been subjected to hyper-exploitative conditions often approaching a form of slavery, with migrants from rural areas subjected to extreme precarity, treated as a safety valve for absorbing the social costs of fluctuating demand. In their defence of the Chinese Communist Party Gabriele and Jabbour dismiss the importance of workers' 'freedom' as a criterion for judging whether or not a social formation is a path towards socialism. They write, 'the international working class movement is no longer in its infancy. We must therefore be careful to avoid falling into Promethean voluntaristic fallacies and stick to sobriety and pragmatism' (Gabriele and Jabbour 2022, p. 319).
- 20 A criticism of 'socialism with Chinese characteristics' on a more concrete level can be based on Dani Rodrik's argument that China's model of development worsens the pro-

A true advance over capitalism cannot rest on economic growth alone or on overcoming a supposed stifling of the development of productive forces. (It is unlikely that socialism or any other possible form of future society will ever institute a faster rate of technological change than capitalism.) To be a true advance beyond capitalism requires far more than beating capitalist regimes at their own game. It requires a quite different sort of game.

5. The above criticisms of so-called 'state socialism' suggest that liberal democratic republicanism cannot be dismissed as merely an ideological expression of capitalism. It is that, but it is not *just* that. There is a moment of truth in republicanism that must be acknowledged. The fifth crucial claim of this work, then, is that *any social framework counting as a true advance in human history from the capitalist epoch must overcome the incoherence of liberal democratic republicanism while embracing its emancipatory promise*. So-called 'state socialism' avoids the incoherence but fails to fulfil its emancipatory promise. The better alternative to capitalism is a better form of republicanism.

There is nothing inherently capitalist about the claim that sovereign power lies with the people and not with any divine or natural right of a ruling elite. There is nothing inherently capitalist about the claim that 'the people' is an inclusive category extending to all members of the political community regardless of their class, race, gender, ethnicity, or any other arbitrary distinction. There is nothing inherently capitalist about the claim that social freedom is a matter of living under laws one has legislated oneself (albeit in a more substantive sense than liberal republicans or social democrats recognise). There is nothing inherently capitalist about the claim that social freedom includes individuals being able to live the lives they choose (within limits), free from the domination of others. There is nothing inherently capitalist about the claims that excessive concentrations of social power in the hands of a few is inconsistent with a free society, or that universal suffrage, freedom of speech, freedom of assembly, freedom of religion, and the freedom to own personal property, all matter very much. There is nothing inherently capitalist about the claim that the ultimate purpose of a society is the flourishing of the human beings who make it up, or that access to education, housing, medical care, meaningful work, time for play, and so on, are crucial preconditions for human flourishing.

spects for poorer regions for the foreseeable future. China's success at claiming a space for its industries in leading sectors of the world market shuts out opportunities for nations of the so-called periphery to follow its lead (Rodrik 2012, 2015). An acceptable alternative international framework must be based on universal solidarity, offering comparable prospects for development and flourishing to all. The project cannot be to replace one hegemonic regime with another.

The historical struggles in the past to bring such states of affairs about were emancipatory struggles. The defeats they suffered must be redeemed.

6. In contemporary social theory the two most well-known and influential proposals for a better, more coherent, republicanism are *property-owning democracy* and *market socialism*. Both are understood here as variants of what will here be termed *social republicanism*.²¹ Both reject 'state socialism' on grounds like those given above. And both claim to overcome the incoherence of liberal democratic republicanism by rejecting the capitalist property and production relationships that undermine core principles of liberal democracy and social democracy alike. Nonetheless, *social republicanism also does not offer a satisfactory alternative to capitalist market societies*.

Neither property-owning democracy nor market socialism includes a capitalist class. In property-owning democracy and some versions of market socialism, units of production are cooperatives, with workers having ownership rights they can cash out when they leave or retire. In other versions of market socialism, units of production are owned by the state or by the local community. Some versions of both property-owning democracy and market socialism eliminate equity markets completely. In others capital ownership is dispersed, with all citizens receiving an equal amount of dividend-generating shares upon adulthood they can trade in their lifetime but not bequeath. Almost all advocates of social republicanism insist that republican principles of self-governance are extended to workplaces.²²

There is no need to adjudicate the strengths and weaknesses of different variants of property-owning democracy or market socialism in this Introduction.²³ For our purposes, a general assessment of the core features of social republicanism will suffice. Advocates of a social republic today are descendants of the social republicans criticised by Marx in the nineteenth century. Marx's critique retains its full force when applied to today's iterations.²⁴

21 Defences of property-owning democracy are found in Rawls 2001 and O'Neill and Thad Williamson 2014. For arguments for market socialism by prominent contemporary social theorists see Honneth 2017 and Piketty 2021.

22 See, for example, Diane Elson's proposals in Elson 1988. John Roemer's model of market socialism is a prominent exception (Roemer 1994).

23 In my view the strongest and most detailed model of social republicanism by far is found in Reuten 2023, although he does not use the term.

24 See the extended treatments in Roberts 2017 and Breckman 1999. It must be stressed that Marx's criticisms of social republicans did not prevent him from supporting many of their political demands, such as the extension of suffrage. (See the discussion of transitional demands in the concluding chapter below.)

While social republican models of society abolish a distinct capitalist class, they incorporate generalised commodity production and exchange, with all its preconditions and tendencies.²⁵ As Chapter 2 explains, a necessary precondition of generalised commodity production and exchange is a general equivalent, money. When means of production take the form of commodities, units of production must direct their activity to obtaining monetary returns if they hope to acquire the means of production required for them to continue producing. Similarly, when means of subsistence generally take the form of commodities, individuals must obtain monetary income if they hope to acquire them. In this context competing for monetary returns and monetary income is not a choice made by enterprises and individuals. They are *compelled* to act in this way by the social relations of generalised commodity production and exchange. As I hope to show in Chapter 2, these relations generate a new sort of force in the social world, emerging behind the backs of social agents: *capital*. Marx was correct that there is an immanent drive for the aggregate production and circulation of commodities in the society to devoted to the transformation of the aggregate money (M) invested in production and circulation to be transformed into an aggregate return (M') exceeding the initial investment. Marx terms this the *valorisation process*, with each M' serving as the basis for a new M, beginning the process again. Capital in this sense can be defined as a 'macro-monetary totality', imposing its goal, valorisation, on the society it has emerged from.²⁶ Social agents are trapped within social forms systematically privileging capital's good over human goods, the attainment of capital's purpose over human ends.

From the perspective of this concept of capital, eliminating capitalists as a distinct class – whether by dispersing the private ownership of equity, by assigning private ownership rights to members of cooperatives, or by assigning ownership to the state or local community – is not the only thing that matters. In both property-owning democracy and market socialism, the competitive pressures of generalised commodity production and exchange lead to

25 In this work the term 'model' will be used in a wide sense of a simplified, abstract representation of a complex concrete reality. As Kornai writes, 'Economists of today are inclined to reserve this technical term of the philosophy of science exclusively for models expressed in the language of mathematics. While a mathematical formalization is one possible way of creating a model, it is certainly not the only one, and it has both advantages and drawbacks. There is a trade-off between accuracy and rigor, on the one hand, and the wealth of description of reality, on the other' (Kornai 1992, p. 15).

26 Moseley 2015.

the emergence of capital behind the backs of the competing social agents. This state of affairs is not reversed in the models of social republicanism incorporating self-managed workplaces. Social republicanism is in effect a call for a social world of 'capital without capitalists'. This was the core of Marx's critique of Proudhon and his disciples in the nineteenth century, and it fully applies to those echoing Proudhon today.²⁷

Social republicanism, no less than liberal democratic republicanism, is ultimately incoherent. Its defenders insist that abolishing the capitalist class enables the social pathologies of capitalism to be overcome. But their models incorporate generalised commodity production and exchange, which would bring about the emergence of capital and its reign over the social world whether or not there is a distinct capitalist class. Generalised commodity production and exchange, in other words, is capitalist production and exchange. Social republicanism attempts to affirm the former while rejecting the latter, an untenable combination.

Generalised commodity production and exchange is accompanied by a generalised alienation of social individuals from each other. The absence of a capitalist class with a strong material interest in dividing workers may make this alienation from others somewhat less sharp than it might otherwise be. But the intrinsic alienation of a world of relentless competition for monetary returns remains and does not cohere with the social republican project of creating a world where solidarity pervades everyday life.

Another way to express the limitations of both property-owning democracy and market socialism concerns the way the dialectic of particularity and universality plays out in them. In both variants of social republicanism investments are generally made by particular units of production and distribution, based on their particular standpoints and their particular interests. Social republicans insist that this arrangement mobilises the tacit and local knowledge of particular individuals and groups, acknowledging the moment of truth in Hayek's critique of central planning. But for there to be a true advance in world history beyond capitalist market societies, this mobilisation must simultaneously tend to further the common social good. When investment decisions determining the path of social life are made from particular points of view and based on particular interests, their relationship to the good of the community as a whole is far too contingent for the latter to be a substantive actuality.

27 Smith 2017a, Chapter 12, develops this argument in detail with respect to the Property-Owning Democracy advocated by John Rawls and other contemporary liberal egalitarians as a supposed alternative to both capitalism and socialism.

A further source of difficulty in property-owning democracy and market socialism can be termed the gravediggers problem. Even without a distinct capitalist class, generalised market competition generates 'winners' and the appearance that their market returns are their 'just deserts'. The extensive and steeply progressive taxes social republican models require will 'naturally' tend to appear to be taking away from the successful what is rightfully theirs. These appearances are false and easily refuted theoretically. Social republicans hope that civic education will allow everyone the ability to criticise misleading appearances. But market societies produce agents with a strong material interest to accept the way things appear to be. Those appropriating superior money returns have a material interest in believing they are due to their superior intelligence, effort, and creativity. They have a material interest in forming coalitions to advocate for lower levels of taxation. They have a material interest in pushing for fewer constraints on their actions. And in social republicanism, no less than market capitalism, the benefits (to them) of such policies are concentrated, while the costs (to others) of those same policies are widely dispersed. It is generally far easier for concentrated groups with strong common interests to organise effectively than dispersed social agents bearing dispersed costs. If there is a systematic tendency for social agents to arise within a model who have the interest and capability of undermining it, and the only safeguard against that tendency is the hope that they can be educated to refrain from acting on those interests and exercising that power, then the model is flawed. The model in effect creates its own gravediggers, something no acceptable advance over capitalist market societies should do. (Needless to say, this problem is even worse when a distinct capitalist class remains, as it does in liberal democratic republicanism.)

No less than liberal democrats or social democrats, advocates of social republicanism appeal to the state as a magic wand capable of waving away the limitations and distortions of generalised commodity production and exchange with the proper policies. But here too there is a jarring disconnect between the structural tendencies that *necessarily* tend to arise in a system of generalised commodity production and exchange and the *contingency* that the accompanying political order will have personnel who i) accurately recognise the problems for what they are, ii) possess the capability and disposition to formulate laws and regulations that adequately address those problems, iii) have the capability and disposition required to implement those laws and regulations effectively, and iv) will not reverse those laws and regulations at some later point in time on the grounds that they excessively impede the production and exchange of commodities.

In fact, however, we should not assume that iii) is even a contingent possibility in the social republican framework. By incorporating the social relations

of generalised commodity production and exchange, it includes the impersonal alien power of capital, the systematic alienation of producers from each other, the limitations of investment decisions made from a particular standpoint by those with particular interests, and the problem of generating its own gravediggers. Laws and regulations leaving the defining social relations of market societies intact cannot eliminate essential features of those relations.

Social republicanism, in brief, does not offer a true alternative to capitalist market societies.

7. The seventh and main thesis of this book is that *there is a satisfactory alternative to capitalist market societies, republican socialism, that would be both feasible and a significant advance in world history*. It incorporates the valid elements of liberal democratic republicanism and social republicanism while overcoming the systematic limits and distortions of both.

Liberal democratic republicanism locates sovereign power in 'the people', a notoriously vague concept. Socialist republicanism takes all those in the global community who reject all forms of social oppression (or, more positively, who affirm the ongoing project of universal human emancipation) as the sovereign constituent power. While the two claims are similar in some respects, there are two significant differences. First, for socialists the political community is unequivocally defined in terms of social individuals in social relationships, rather than as an aggregate of isolated atoms as the liberal tradition often assumes. Second, the solidarity upon which the political community is based is not arbitrarily restricted to those who happen to find themselves within a set of territorial borders, ultimately arbitrary and almost always originally produced by violence. Space matters in human life.²⁸ The collective project of constituting a superior alternative to capitalism is essentially an internationalist project.

The sovereign power of associated social individuals cannot be reassigned to any authority over and above the associated individuals. Socialist republicanism, like other forms of republicanism, accepts that political authority can be temporarily delegated. But delegation is legitimate if and only if those exercising authority are accountable in fact (and not merely in words) to those over whom their authority is exercised. The form of socialism advocated here also shares the traditional republican fear of excessively concentrated power – not because the dispersal of power can be derived as a transcendental principle

28 The model of socialist republicanism presented in later chapters proposes institutions and social practices on different geographical levels.

of reason, but because the need to avoid excessive concentrations of power is a truly important lesson of past emancipatory struggles. Like other forms of republicanism, republican socialism also affirms the value of making its core principles and commitments explicit in a special document, a constitution. But the constitutional principles in republican socialism are not abstract moral ideals; they are, again, the result of collective and ongoing learning processes emerging in the course of emancipatory struggles.

Social republicans are right to insist that the concentrations of economic power amassed by a relatively small class in capitalist market societies necessarily tend to generate concentrations of political power incompatible with liberal democratic republicanism's professed principles. This does not mean that governments in capitalist societies are always and everywhere mere instruments of the ruling class. But it does mean that they will often enough be such instruments. When they aren't, the private power of capitalists ensures that any policies they do not approve of will tend to be limited, distorted by loopholes, and subject to reversal when the balance of political forces shifts in favour of capitalists or when legislatures believe that rescinding reforms is required to spur private investment.

Social republicans are also correct to insist that wage slavery is a form of slavery. If freedom is living under laws one has made oneself, then the capital/wage labour relationship condemns most adults to spend most of their waking lives in a social context where their freedom is denied.

Property-owning democracy and market socialism, the most important variants of social republicanism, call for a democratic republican form of government, the elimination of a capitalist class privately owning the society's productive resources, and the extension of democracy to self-managed cooperatives. Socialist republicanism affirms all this as well. But for the reasons briefly sketched above (and developed at greater length below) claims made by defenders of social republican models are undermined by their affirmation of market forces. Their incorporation of generalised commodity production and exchange leads to a social world of 'capital without capitalists' incompatible with their professed goals.

It is imperative, then, that an alternative social form of production and exchange overcoming capital's domination (and not just capitalists') can be developed and shown to be viable. This book takes up that challenge.

8. *The project of developing a republican socialist model of society is consistent with Marx's legacy.* While the present work is not a study of Marx, I shall regularly make reference to his work. Marx called for a social world where '*the full and free development of every individual forms the ruling principle*'.²⁹ As an

29 Marx 1976, p. 739.

abstract normative principle this precept did not fundamentally differ from the normative principles of social republicans in his day. Nor does it fundamentally differ from the 'liberal egalitarian' principles invoked by advocates of social democracy, property-owning democracy, or market socialism today.³⁰ Marx's argument was instead that in a social world governed by the imperatives of capital (Commodify! Monetarise! Valorise!), the full and free development of every individual does not and cannot have material actuality. Normative social theorists who overlook or deny that fact remained trapped in ideology. This does not make normative thought irredeemably ideological in itself.³¹

There is now an extensive body of scholarly work arguing that Marx should be seen as a radical republican. In his early writings, Marx's critique of Hegel's defence of hereditary monarchy, a landed aristocracy with legislative power, and an unaccountable bureaucracy, explicitly appealed to republican principles.³² A period followed when Marx expressed nothing but disapproval of the dominant republicanism of his day. But his emphatic polemics against the social republicanism of Proudhon and others did not imply a rejection of republicanism in toto. Marx continued to defend republican demands for collective sovereignty, accountable forms of authority, a free press, the need for a society where all stand as equals. He simply insisted that the incorporation of market forces in the social framework Proudhon and others endorsed would make it impossible to actualise republican self-governance, since the impersonal domination of capital would remain in force. In the final period of his life Marx explicitly affirmed the radical republicanism of the Paris Commune. The Commune was forcibly overthrown before it could be extended, and not all Communards would have supported an extension to full republican socialism. But the seeds of full republican socialism were there, and Marx endorsed them.

Marx had more to say about socialism than is often recognised.³³ However, he never developed anything approaching a full model of republican socialism. It was not unreasonable for Marx to refrain from proposing such a model. Given the uncertainties of the future, it may seem pointless for anyone in the

30 Smith 2017a.

31 It is quite mistaken to oppose a purely 'scientific' and a merely 'humanist' reading of any of Marx's works. Throughout his life normative and empirical claims are inseparably combined in all his writings. Marx's multi-dimensional critique of political economy is among many other things a contribution to normative social theory of unrivalled importance.

32 This claim and others made in this paragraph are documented at length in Leipold 2017. See also Marx 1986a, Luxemburg 1971a, Draper 1974, Roberts 2017, Thompson 2018a, Shoikhedbrod 2019, and Muldoon 2022.

33 See Hudis 2013, 2019, and Chattopadhyay 2016.

present to anticipate what social agents in the future will or should or must do. It also seems arrogant to attempt to constrain the freedom of those future agents. And it seems futile, since they will be able to simply disregard instructions from those long dead. These considerations, however, are not the only relevant ones.

One immensely important consideration today is the lasting effect the implosion of the Soviet Union has had on popular consciousness. There is widespread agreement that its demise established conclusively that there is no feasible way to organise contemporary societies in a stable and attractive manner that does not incorporate market forces. Pessimism regarding a viable and attractive alternative is extremely strong even among those who recognise the fatal flaws of capitalism. For some, centrist liberal democracy is the best we can hope for; others hold out hope for social democracy, property-owning democracy, or market socialism, positions that all have their own fatal flaws. Unless there is a reasonably worked out model of the institutions and social practices of republican socialism, the practical horizon of social life, including the horizon of progressive social movements, is likely to remain restricted.

Nonetheless, anyone attempting to develop a model of socialism must consider Engels's powerful negative assessment of the utopian socialist models constructed in response to the social problems of the nineteenth century:

The solution of the social problems, which as yet lay hidden in undeveloped economic conditions, the Utopians attempted to evolve out of the human brain. Society presented nothing but wrongs; to remove these was the task of reason. It was necessary, then, to discover a new and more perfect system of social order and to impose this upon society from without by propaganda, and, wherever it was possible, by the example of model experiments. These new social systems were foredoomed as Utopian; the more completely they were worked out in detail, the more they could not avoid drifting off into pure phantasies.³⁴

Whatever Engels's intentions may have been, I do not take what he says to imply that detailed anticipations of socialism must always be avoided. The passage warns against such anticipations when the contours of socialism 'as yet lay hidden in undeveloped economic conditions'. Today the contours of a solution to the social pathologies capitalism creates are not so hidden, as I shall attempt to

34 Engels 1970.

show in this book. It is for the reader to decide whether the chapters that follow drift off into 'pure phantasies'. If they do, the fault is with the author, and not the nature of the project.

9. The final claim of the book is that *the model of socialism presented in the following chapters advances our understanding of what republican socialism is and the shape it could take.*

A number of models of socialism developed over the last decade have strong family resemblances with the one developed here. David Schweickart's model of Economic Democracy, Pat Devine's system of negotiated coordination, Daniel Soros' platform socialism, the parecon (participatory economics) model of Albert and Hahnel, Michael Leibowitz's writings on socialism, David Laibman's multilevel democratic iterative coordination (MDIC) model, the proposals of Paul Adler and Richard Westra, to mention only some relevant examples, all attempt to describe a socialist system of self-governance without domination. All attempt to make an unequivocal break from a society dominated by capital's valorisation imperative. They are all important contributions to understanding how a republican socialist framework might work, whether or not their authors employ the term 'republican socialism'.³⁵ Those making relatively extensive use of markets incorporate non-market driven investment decisions incompatible with property-owning democracy or market socialism in the sense of the term used here. Those making extensive use of central planning incorporate democratic accountability of planners incompatible with so-called state socialism.

A detailed presentation and assessment of these models would require a separate book. Some of their specific features will be considered at appropriate places below and contrasted with the model presented here.³⁶ They are all indisputably pathbreaking contributions. But none of them provides the last word. *No* model of a future society will ever be the last word. Some aspects of previous accounts need revision; others have to be rejected. Collective discussion of the theoretical lessons and practical implications of social struggles for emancipation is ongoing. As those lessons are debated and their implications

35 The model developed by Tim Platenkamp is explicitly defended from a republican socialist standpoint (Platenkamp forthcoming). Unsurprisingly, it has especially strong affinities with the position independently developed here.

36 To anticipate briefly (and oversimplify greatly), the model of socialism defended in this work incorporates 'prices' as do others. But 'prices' here are neither market prices nor measured solely in labour hours. And the socialism defended here incorporates extensive planning as other models of socialism do. But the planning is focused on indicative plans encouraging flexible decentralised responses to changing circumstances, and not on centralised plans requiring comprehensive input and output matrices.

explored, new understandings of the institutional framework and social practices capable of making republican socialism a material actuality will emerge.

The work that follows is intended as a contribution to this collective discussion. The model that is developed is by no means a complete description of every significant aspect of any possible republican socialist society. Some aspects of it too will surely need revision, while others will have to be abandoned. If our understanding of what republican socialism is and the shape it could take is advanced, that is enough.

2 Summary of the Book

Chapter 2 presents a general case against capitalist market societies, based on Marx's critique of political economy. Chapter 3 argues that contemporary global capitalism has reached its historical limits. This does not mean that its imminent demise is inevitable, or that capitalism's much-vaunted technological dynamism has been stifled. The problem is that its technological dynamism is no longer connected to economic dynamism in the ways it has been in the past. This makes the question of a world historical alternative to capitalism ultimately inescapable, however desperate attempts to escape this conclusion might be.

I argue in Chapter 4 that Marx's call for a society where '*the full and free development of every individual forms the ruling principle*' provides an appropriate starting point for a relatively detailed sketch of a constitution for a socialist alternative.³⁷ A special status for this 'ruling principle' cannot be claimed on the grounds that it was divinely revealed, or has been sanctified by custom, or can be transcendently deduced from pure reason. It warrants special status because it expresses a result of the learning processes emerging in the course of historical struggles for emancipation. Any institutional framework and set of social practices whose ruling principle is inconsistent with 'the full and free development of every individual' allows forms of oppression that must be struggled against. Unpacking the implications of Marx's assertion principle suggests a number of other principles expressing core commitments of the republican socialist project. They too are based on crucial lessons from struggles against oppression. They too warrant the special status of constitutional principles.

37 Marx 1976, p. 739. Many other statements of a similar nature are scattered throughout his corpus. Comprehensive overviews are found in Lebowitz 2010 and Shoikhetbrod 2019.

It should go without saying that all attempts to formulate the lessons of history are contestable. No doubt many of the general principles introduced in Chapter 4 will have to be revised or even rejected. The socialist project, again, is an ongoing collective project, and that includes ongoing reflection on the core commitments of the project. There are, however, compelling reasons to insist that *self-governance without domination* and *production for social needs* are required for the full and free development of social individuals. I argue in addition that solidarity across territorial borders requires a collective commitment to provide every community with its fair (per capita) share of investment funds and of the aggregate environmental footprint compatible with planetary conditions conducive to human flourishing.

It should also go without saying that a set of abstract principles does not a model of socialism make. For these principles to have material actuality there must be a suitable institutional framework and set of social practices in place. We have a reasonably good understanding of how and why self-governance and production for social needs have been limited and distorted in the past and in contemporary capitalism. The socialist project is to overcome these limits and distortions to the greatest feasible extent in the given historical circumstances. The model of socialism presented in this book describes how this might be done.

Chapters 5–10 consider a socialist ‘realm of necessity’, understood in terms of the socially necessary labour required to reproduce a flourishing socialist society over time. Since it is impossible to talk about everything at the same time, a decision must be made about the order of exposition. Chapters 5 and 6 consider the relatively simple case of local production for local needs with local self-governance. A process of democratically determining social needs and the priorities among them is proposed, combining elements of direct participatory democracy, self-selecting representative bodies, representative bodies selected by election, and representative bodies selected by sortition.³⁸ Self-governing

38 This proposal contrasts with Daniel Saros’s model of platform socialism, where decisions about social needs (including needs for public goods) are made by individuals separately and then aggregated. It also contrasts with Pat Devine’s suggestion that social needs be determined by units of production and associations of producers operating in the same sector, both with Boards of Directors representing a full range of social perspectives. Saros’s approach shares many of the unfortunate shortcomings of the social atomism of market societies. Requiring every unit of production and every sectoral association to have a Board of Directors representing a full range of social perspectives as Devine proposes seems impractical.

Production Collectives then consider how they might best address subsets of those needs over the course of the coming extended period.³⁹

Groups of workers from the relevant sectors and from the given locality provide local Production Collectives with feedback on their initial plans, as well as assessments of their final revisions. Taking those assessments and other relevant information into account, Social Investment Centres then allocate social funding to the Production Collectives promising to address social needs most effectively.⁴⁰ The result of their allocation decisions is in effect an indicative plan for social production in the coming period. The process of selecting the members of Social Investment Centres charged with making these allocations, the social coordination among Centres, and the oversight of their work by other institutions of collective self-governance, help ensure that social funding necessarily tends to further the goals of the socialist project.

In this model all investments in Production Collectives, and all income received by members for their contributions to Collectives, stem from the allocations of Social Investment Centres. All flows of social funding are socialised. This feature contrasts with models of socialism where units of production retain monetary returns from sales, and a significant portion of both their investments and the income of their members stems from retained earnings.⁴¹

The members of Production Collectives receiving social funding are sometimes committed to produce specific products over the course of the coming extended period. In most cases, however, they have only made a general commitment to address a range of social needs.⁴² They must decide over the course of the period the specific goods they produce, the means of production they employ, from which other Collectives means of production are acquired, how labour processes are organised, and so on.

39 Production Collectives – self-managing workplaces engaged in production (and distribution) of goods and services for social needs – are one of the two basic forms of Worker Collectives in our model. The other is that of self-managing organisations of collective self-governance in the community (for example, the representative bodies just mentioned above and the Social Investment Centres that are about to be introduced). When the generic term ‘Worker Collective’ is used, it should be clear from the context which type is being discussed.

40 I use the term ‘effective’ here to stress that standard notions of economic ‘efficiency’ are far too narrow, failing to account for profoundly important ‘externalities’ (such as the degree a production process mobilises the creative intelligence of the workforce, depletes non-commodified resources, generates wastes that in the aggregate impose tremendous ecological costs, and so on).

41 While the model of socialism constructed by David Schweickart differs from standard market socialist models in important ways, it is similar to them in this significant respect.

42 In contrast to many other models of socialism – the platform socialism of Saros (2014),

Just as members of Worker Collectives have the freedom to decide the units of production they will acquire particular inputs from, in republican socialism individuals, households, and other community groups have the freedom to decide for themselves which products best address their needs and from which Collectives those products will be acquired.⁴³

There is a need for a system of socialist accounting to track 1) the allocation of investment funds to Collectives, 2) the allocation of income to members of Collectives (and others engaged in necessary social labour outside formally organised units of production), and 3) the use of investment funds and income to acquire the production and consumption goods judged by those directly concerned to best address their needs. This accounting system requires a unit of account, similar in some respects but quite different in others from present and past forms of money. Something like a price system is also required, although it will not make use of market prices. The costs of acquiring products must reflect the full social costs of production, and this market prices cannot do. A proposal for how these requirements could be met is introduced in Chapter 5 and further elaborated in Chapter 7. This is an important feature of the model of socialism defended here.

I argue in Chapter 7 that the units of account in the model lack generalised exchangeability and other essential determinations of capitalist money. I also show that the use of these units – whether referred to as ‘money’ in scare quotes, ‘quasi-money’, ‘points’, or some other term – does not make the model a form of market socialism. The most important consideration is that the valorisation imperative has no place here.

The increasing complexities of production for social needs on the regional (Chapter 8) and national and international (Chapter 9) levels are then considered, along with forms of self-governance on these levels.⁴⁴ Special attention is given to the formation of regional, national, and international supply chains, along with the important role of regional, national, and international

the parecon model of Hahnel (2021), the computerised planning model of Cockshott, and Cottrell (1993) are prominent examples – planning in this model culminates with an indicative plan rather than a comprehensive central plan in the form of a matrix of inputs and outputs. In this respect it is closer to the proposals of Schweickart and Platenkamp.

43 This dimension of the model contrasts with proposals of Saros and Hahnel, who both require that final users must make relatively strong precommitments to acquire specific products well before the time of acquisition.

44 The models proposed by Pat Devine and David Schweickart have a great many strengths. Being limited to a national economy is not one of them, in my view.

innovation systems. Chapter 10 considers the crucial issues of incentives and efficiency in the formally organised system of production for social needs in republican socialism.

Chapter 11 turns to the ‘realm of freedom’ in socialism. Its contrast with the limited and distorted freedom of leisure time in capitalism is striking. In capitalism ‘free time’ tends to become incorporated within ‘capital’s time’, dominated by the same valorisation imperative dominating the capitalist workplace. (‘Accumulate as much capital as possible as fast as possible!’) This tendency is eliminated with the quite different politics of time in socialism. A second difference is that in socialism the realm of necessity tends to contract while the realm of freedom expands over time, while in capitalism the dominant tendency is for ratio of the two to be relatively stable. Productivity advances in the realm of necessity tend to result in an expansion of surplus labour producing surplus value, rather than a lessening of workers’ time in that realm. A third theme of this chapter is how the emancipatory potential of freely undertaken and freely organised commons-based peer production, producing knowledge goods freely available to anyone who wishes to use them, will be fully unleashed in a republican socialist society. While the expansion of the realm of freedom is in itself an important advance in world history, the unimaginably immense potential for commons-based peer production to further human flourishing is central to the case for socialism as well.

The concluding Chapter 12 begins with a review of the book’s contents. The final section is devoted to the inescapable question, how might we get from where we are now to where we want to be? Even if there are compelling reasons to reject capitalist market societies, and even if a superior alternative can be shown to be feasible, none of that would matter much if there were no path from here to there.

As crucial as this issue is, it falls outside the scope of the present work.⁴⁵ The all too brief discussion in Chapter 12 begins by conceding that no path guarantees success. Every course of action promising to move us closer to socialism includes the danger of being diverted from that goal. But just as the model of socialism defended in this book incorporates socialist pluralism, socialist practices within a capitalist global order must take a plurality of forms. In some concrete circumstances certain forms of practice may be

45 Readers with a special interest in that topic will have to look elsewhere for a more comprehensive discussion. Chapter 6 of Adler 2019, the papers in Panitch and Albo 2019, and Callinicos 2023 would be appropriate places to start.

more likely than others to generate an objective basis for hope in a better world; in other circumstances other forms of practice might be more promising.

We must do what we can to keep that hope alive, remembering that we could, as the poet says, make this place beautiful.

Capitalism (and Capital)

The first task is to motivate the project of constructing a model of socialism. The motivation is straightforward: capitalism is unacceptable, and a better way of organising social life needs to be established sooner rather than later. This chapter and the next are devoted to defending this judgement. In my view, Karl Marx's concept of capital, and his derivation of major structural tendencies of a social world dominated by capital, remain unsurpassed contributions to social theory. The present chapter develops a general argument against capitalist market societies based on Marx's critique of political economy.

There are dangers beginning here. The argument is on a relatively abstract theoretical level. It is complex and controversial. Even a succinct presentation requires a fair number of pages. Some readers might become discouraged by the complexities, controversies, and length before the core chapters of the book have been reached. Others might simply be in a hurry to get to the discussion of socialism. Readers already familiar with the interpretation of Marxian theory defended here may also become impatient. Nonetheless, a general critique of capitalism is demanded before other issues can be properly raised.

A comprehensive analysis and criticism of the essential determinations of the capitalist mode of production is an immense task. (In Marx's initial estimation, it would take six separate Books, with the *Book on Capital* only the first.¹)

Since the main goal of the present work is to outline an alternative to capitalist market societies, the case that follows will focus on a few essential matters.² Before turning to that task, however, it makes sense to sketch the most widely accepted justifications of capitalist societies, which I shall refer to as the 'standard view'. This offers the opportunity to elaborate further on the varieties of republicanism that provide a contrast to the republican socialism defended in this work. Section 2 then presents a Marxian critique of the standard view, emphasising capital's emergence as an alien power over human society. What is good for capital (profits or the 'valorisation' of the monetary value initially invested) now has priority over what is good for social individuals and the society constituted by their social relationships. Some implications of this state of affairs are derived in the third section. A brief conclusion follows.

1 See Lebowitz 2003.

2 A more extended treatment is found in Smith 2017a.

1 The 'Standard View'

Apologetic accounts of capitalism have taken many forms, including the construction of models of tremendous complexity and mathematical sophistication. At the heart of them all, however, we find appeals to basic notions of freedom, equality, and well-being. For our purposes a fairly quick summary of the meaning and significance of these terms in the main variants of the standard view will suffice.

1.1 *Freedom and Equality*

Few today dispute that societies where the production and distribution of goods is directly organised through unaccountable political power fail to institutionalise freedom and equality.³ In a slave society slave owners have the power to force slaves to serve as means to their owners' ends, denying them recognition as fellow subjects deserving equal respect as ends in themselves. In social orders where feudal lords have an analogous power over serfs, or tribute-extracting elites have the power to force peasant households to provide tribute, or ones where those with high positions in bureaucratic command economies have the power to impose their dictates, the vast majority of social agents are similarly treated as mere means for others to use,

For defenders of capitalism private property rights are an absolutely essential component of personal and social freedom. When something is socially acknowledged as mine, I have the power to decide for myself how it is to be used and what purpose its use will serve.⁴ In the standard view the most fundamental private property right is ownership of oneself. No person is the property of a tribe, a slave owner, a lord of an estate, or state officials.

Private property rights over things includes the freedom to trade what I own with others who freely agree to trade with me. Contracts resulting from force or fraud are in principle invalid. Since free agreements will only be made if the exchanging parties believe they will help them further their ends, contracts presuppose that individuals have the freedom to select those ends and the means they employ to further them.⁵

3 Unless otherwise noted, in this work 'goods' will be used in a broad sense including 'services' produced and sold as commodities.

4 This is the reason in *The Philosophy of Right* Hegel begins his account of modern society where 'all are free' with the category 'property'.

5 Individuals may be born into families, churches, polities, and other associations where certain forms of behaviour and ends are encouraged or even mandated, while others are discouraged or forbidden. But once they reach the age of maturity individuals in modern capitalist

Contracts institutionalise equality in that both parties are equally free to make agreements and once they have been made, both are equally required to adhere to the terms they have freely accepted. In other words, those engaging in market transactions in effect reciprocally acknowledge each other as ends in themselves, with the same freedom to determine their life goals, the same right to own and exchange property.

In market exchanges, then, freedom and equality are not abstract empty ideals, mere oughts in the standard view. The equality of free subjects is concretely actualised in the material practices of contractual exchanges. In this sense freedom and equality form an indissoluble package in modern market societies ... in principle, at least.

No defender of this view would deny that there have been countless cases where the freedom and equality of social agents in market societies have *not* been respected. Both have been refused to specific groups of social agents for very long periods of time in the past. Unfortunately, such maltreatment continues today. For defenders of the standard view, however, such tragedies are not intrinsic to capitalism. Just the opposite; they are perversions of its fundamental logic.

1.2 *Well-Being (1): Benefits from Trade*

From the standpoint of the standard view the benefits from the freedom to engage in market transactions are profound. Suppose you have more than you need of something, but less of what you want of something else, while I have more than I want of what you need, but not enough of what you have too much of. Let's make a deal! If we freely agree to exchange, each of us will be better off. Sales between capitalist producers and their customers exemplify this basic pattern. When sales occur at prices that provide profits to producers, while consumers obtain products that better help them live the lives they have chosen to live, both clearly gain. Each contributes to the well-being of the other.

In the standard view, human well-being, no less than freedom and equality, is at once a normative value and a descriptive term referring to essential features of capitalist market societies. A good society, advocates of the view insist, would allow voluntary transactions to continue until there were no more mutual benefits to be won. This is precisely what capitalism does. It follows that capitalist market societies necessarily tend to further the good of the soci-

market societies have (in principle, at least) the freedom to agree or not to remain in these associations. Whatever their choice, for defenders of the standard view it affirms that as independent subjects they have an ultimate right to determine for themselves the ends they pursue as well as means to help them further those ends.

ety as a whole. Those engaging in market transactions do not necessarily make furthering the social good their ultimate goal (although they are free to do so, should they so choose). It is even possible for everyone to be only concerned with their private self-interest. The good of the society as a whole is nevertheless furthered, a higher level of aggregate well-being nevertheless attained. In the famous phrase of Adam Smith, there is an 'invisible hand' operating behind the backs of agents in market societies, bringing about the general social good whatever their private intentions might be.

1.3 *Well-Being in Capitalist Market Societies (2): Benefits from Innovative Dynamism*

Improvements in material well-being occurred in earlier historical periods, but at a slow pace. Life expectancy, infant mortality, nutritional levels, and living standards barely improved for most people over the course of millennia. For those accepting the standard view, the case for capitalism is immensely strengthened by its unprecedented technological and economy dynamism, and all the gains in well-being that accompany it.

In capitalist market societies producers compete for sales. Those offering products that do not meet consumers' wants and needs as well as similarly priced competitors' offerings tend to lose market share or go bust. Those with superior products in the same price range tend to be successful and expand. Competitive pressures, then, give units of production a powerful motivation to seek *product innovations* that better meet the wants and needs of their customers, helping them better live the sorts of lives they have chosen to live. Similarly, if the products of competing producers are of comparable quality, the one producing more efficiently necessarily tends to enjoy greater market success. A producer able to produce a good at a lower unit cost can undercut the prices of competitors and still enjoy a superior return. This gives units of production a powerful motivation to seek *process innovations* allowing customers to obtain the products they desire at lower cost.

Not every producer in a market society will act on these motivations, and not everyone who does will be successful. Nonetheless, defenders of the standard model conclude, capitalist market societies necessarily tend to have a higher rate of innovation, a greater degree of technological and economic dynamism, than any other form of social organisation in world history.⁶ As a result, human well-being is furthered to an unprecedented degree.

6 Baumol 2003.

World GDP Per Capita (1990\$)

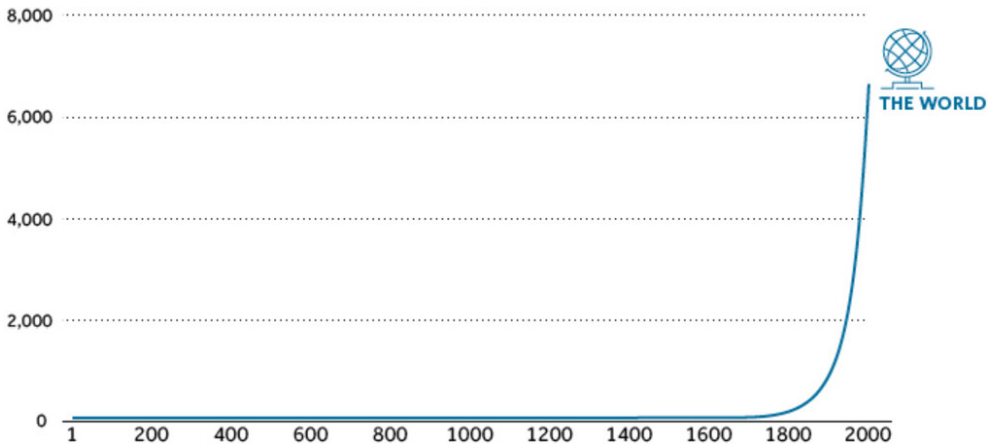


FIGURE 2 Capitalism in a world historical perspective
 “STATISTICS ON WORLD POPULATION, GDP, AND PER CAPITA GDP. 1–2008 AD”. ANGUS
 MADDISON IMF

This account appears to be strongly corroborated by the historical record.⁷

Historically unprecedented gains in life expectancy have been attained in the capitalist epoch, along with lower rates of infant mortality, higher nutritional levels, and a general improvement of living standards. These material gains expand both the possible ends social agents can realistically pursue and the means available to pursue them. In other words, the freedom to set ends and select means is liberated from previous constraints.

1.4 *A Digression on the Role of Money in ‘the Standard View’*

A few remarks on the standard view of money in capitalist market society are in order. Like other forms of private property, money is conceptualised as a means to help people live the sorts of lives they have chosen to live. More precisely, it is a meta-means, similar to a tool used as means to produce other means (the goods that directly help us pursue our ends). Money is a means, a tool if you will, to acquire goods that directly help us pursue our ends.

The basic story is familiar. In a social world without money contractual exchanges would occur only when two agents came into contact who each have too much of what the other wants come into contact, a relatively rare occurrence. The immense benefits of a system where exchanges tend to con-

⁷ Morris 2010.

tinue as long as there are mutual gains to be won would not be enjoyed. The social invention of money as a universal *means of exchange* overcomes this 'non-coincidence of wants' problem. If you have something that would enrich my life, but I don't have anything you desire, I can now simply give you money in exchange, which you can use at some later time to purchase from someone else a good that will help you better live the sort of life you have chosen to live.

The ability of money to serve as a means for *measuring value* is also quite important in the standard view. Without a common measure for expressing the value of different goods, coming to agreements regarding the ratios of exchange for incommensurate things with incommensurate properties would be extremely time-consuming and extremely fraught, far more prone to break down than to succeed. Monetary prices enabling the worth of different sorts of goods to be measured and compared make this process tractable.⁸

Matters are complicated by the fact that money is obviously more than merely a means in capitalist market societies. Investors and managers of the companies they invest in are obviously profit-driven; the goal of their actions is to make money. In the standard view, however, money is at most only a *proximate* end. Investors make acquiring money their goal today in the hope of using money as a means tomorrow. Even when monetary returns are aimed at, then, money remains essentially a means, specifically a means to *store value over time* and a *means of purchase* at a later time.

Turning from the standpoint of individual investors to the point of view of society as a whole, in the standard view the profit-driven market economy is itself a means to the end of a free and prosperous society, where all persons are recognised as ends in themselves, and where material well-being is advanced over time by economic and technological dynamism.

1.5 *Varieties of the Standard View (Varieties of Republicanism)*

The account of capitalism has so far abstracted from any actual or potential shortcomings. Most of those professing the standard view acknowledge that there are tendencies for serious problems and that these tendencies must be checked if the freedom, equality, and well-being of individuals are to be adequately furthered.

The most straightforward example comes when the liberty to own and exchange property is infringed by others, whether through overt force, the threat of force, or fraud. As Hobbes pointed out long ago, if we cannot act freely,

⁸ In the standard view, the monetary value of an object of exchange is its price, determined by supply and demand. The price is assumed to reflect both the contribution of the product to addressing human preferences and the costs of its production and use.

then in the sense that matters we aren't free. In light of this consideration all versions of the standard model of capitalist market societies include a state with coercive powers sufficient to establish and maintain a legal order where its members are protected from force, the threat of force, and fraud.

A state providing the public good of a legal order is a public institution. It cannot legitimately be the private possession of a king, an aristocracy, the members of a particular confession, or anything of that sort. Its legitimacy does not rest on custom, religious dogma, or an elites' claim to an inherent right to rule. In the standard view, both the state and its claim to legitimacy, properly rests on 'the will of the people'. This 'republican' concept of popular sovereignty is a truly revolutionary idea in world history.

Like most other key terms in social theory, the meaning of 'republican' is deeply ambiguous and contested, as we have seen in Chapter 1 (see Figure 1). In the *authoritarian republicanism* of Thomas Hobbes, the human condition outside a political order would be a state of unrelenting war. It is in the rational interest of all to avoid this condition, and so all have a rational motive to actually (or at least tacitly) consent to establishing a political society and then contract with other members of that society to establish a sovereign power exercising authority in their name. This is a republican theory in that the constituting source of sovereign power rests with the members of the political community taken collectively, and not with a ruler or ruling caste.

In Hobbes's account, however, once the sovereign power has been constituted its holder is unconstrained in the use of coercive powers, so long as domestic peace is maintained. Nonetheless, Hobbes was convinced that the sovereign would grant subjects the liberty to own property, engage in contractual exchanges, seek scientific and technological advances, and in general pursue their personal interests as they best see fit. Granting these liberty rights is required for a prosperous society and ruling over a prosperous nation is in the sovereign's own interest. Sovereigns ruling over prosperous nations tend to have more resources to pursue their projects, greater support among their subjects, and significant advantages in geopolitical competition and conflict.

For Locke, leaving individual rights to the discretion of the sovereign made them far too precarious. When the whims of the sovereign cannot be checked, subjects will eventually find themselves in a continuous state of war (latent or explicit) with the sovereign. Why would anyone consent to establish a sovereign power to escape a continuous state of war if it only meant being condemned to another continuous state of war? The republican principle of popular sovereignty, then, cannot be plausibly seen as a basis for absolutism. In Locke's *classical liberal republicanism* the granting of political authority by 'the people' is conditional on establishing a constitution recognising a set of 'nat-

ural' rights that those exercising sovereign power must respect.⁹ These individual rights include the right to life, liberty, and property, with liberty rights including freedom of speech, freedom of assembly, freedom of conscience, freedom from arbitrary arrest and seizure, freedom of occupation, as well as the freedom to engage in contractual exchanges of property. These rights are taken to be the necessary preconditions for being free from the domination of others.

Classical liberal republicanism also includes a number of political rights, most importantly the right to be subject to laws made by a legislative body representing the people, as opposed to the arbitrary decisions of an absolute ruler. In the constitutional order of a classical liberal republic the source of political authority lies in the collective will of those subject to that authority, as expressed in a representative legislative body. The unconstrained will of the sovereign power in Hobbes is replaced with a sovereign obliged to respect and protect the 'natural' rights of individuals and to embody its collective will.¹⁰

In its classical form liberal republicanism has an extremely narrow view of political representation, assuming that all those economically dependent on those owning extensive property have the same fundamental interests as

9 A constitution can be unwritten; what matters is that respect for natural rights is effectively guaranteed, not the presence of a formal document.

10 A sharp distinction is often made between *republicanism*, concerned primarily with avoiding domination, and *liberalism*, with its emphasis on living under laws that one has in some relevant sense legislated oneself. (For an example of a work making a sharp ('undialectical'; if you will) distinction between freedom in the sense of self-legislation and freedom as the absence of domination from a Marxian standpoint, see William Roberts' *Marx's Inferno*.) From the perspective of the present study, however, these are two sides of the same coin. Freedom from domination without self-governance would be an extremely vulnerable form of freedom. (What would stop whoever has the power to govern from legislating domination over us?) Similarly, self-governance without freedom from domination would be an extremely vulnerable form of self-legislation. (What would prevent whoever has the power of dominating from dominating the governing process?) Each of the types of republicanism considered above reflects both concerns. Authoritarian republicanism includes both the moment of self-legislation in the social contract (establishing a political society first and then a sovereign power), and freedom from domination (the avoidance of a state of war where the domination of others constantly threatens). The connection between the two concerns is even more straightforward in classical liberal republicanism. In this framework tacit consent to an established social order maintaining peace is insufficient for 'self-governance'; living under laws one has established for oneself requires a representative legislature (albeit one that mainstream and more radical republicans today find inadequately representative). And freedom from domination is established by a constitution protecting a set of natural rights. The two dimensions are also inseparable in liberal democratic republicanism, social republicanism, and socialist republicanism, the positions considered next.

those they are dependent on. As a result, only male owners with large property holdings need to be represented in legislative bodies. Classical liberal republicanism is transformed into a third form of republicanism, *liberal democratic republicanism*, when this implausible – false, actually – assumption is abandoned and replaced with universal rights to vote and run for elected offices. Government can only rest upon the consent of the governed when those possessing the authority to make decisions regarding public policies are elected by, and accountable to, all adult citizens affected by their decisions.

Another problem is that the formal rights to participate in social and political life defining liberal democratic republicanism do not establish the material and cultural presuppositions for participating as an equal in political life. When these presuppositions are absent the formal rights of liberal democratic republicanism lack substantial actuality, and it is substantive actuality that ultimately matters in social life, not mere formal possibility. This provides a compelling rationale for granting rights to education, nutrition, housing, health care, and so on, special constitutional status, as well rights to a dynamic public sphere where matters of shared concern can be deliberated upon and thereby help shape the policy making process.

Centrist *liberal democrats* define these rights more narrowly than *social democrats*. From the standpoint of this work, however, this is a difference of degree rather than kind. Both centrist liberal democracy and social democracy count as variants of liberal democratic republicanism as the term has been defined here. Both positions accept the standard view outlined above, affirming generalised commodity production and exchange. Both acknowledge that there are tendencies to serious problems in market societies besides threats to social peace. Both acknowledge the danger of political rights to freedom and equality being merely formal. Both accept that there are systematic tendencies to market failure, and both respond to these tendencies with calls for laws and regulations putting those tendencies out of play.

There are, first of all, market failures internal to the relationship between two exchanging parties. Markets can fail to operate as they should due to asymmetrical information. When a used car seller knows a car is flawed in important ways and potential buyers do not, the latter's contractual agreement to purchase the car cannot be said to be fully 'free' in the normatively important sense of the term. In these circumstances there is no tendency for market exchanges to generate mutual benefits, even when the seller refrains from overt fraud and merely fails to disclose problems. The seller obtains the same proceeds as selling a good car; the buyer is stuck with a 'lemon', generating anger and distrust. If anger and distrust become generalised, the market system as a whole is threatened.

A closely related case involves the process of discovering relevant information rather than its distribution among market participants. Suppose a product has a significant probability of harming users, and that this property could be discovered fairly easily by producers at a reasonable expense. The producer, however, chooses not to investigate. Suppose further that potential buyers lack the capabilities to undertake the research themselves. Unsafe products will then be purchased that would not have been purchased had the buyers known about the (very knowable) risks of harm. In this case too the tendency of market exchanges to provide mutual benefits furthering well-being is put out of play, along with the freedom to make properly informed decisions.

Liberal democratic republicans of all stripes also hold that market failures tend to arise when there is a significant asymmetry of bargaining power between the parties to an exchange. If a hurricane destroys water treatment plants making safe drinking water extremely scarce, the person with stores of bottled water to sell and the prospective buyer are hardly in the same position to negotiate prices. At some point, liberal democratic republicans concede, the excessive bargaining power of one side of a market transaction tends to generate coercive agreements, making any claim of mutual benefits hollow. In their view the problem does not arise only in extreme cases like natural disasters. Market societies unfortunately include a tendency for oligopolies to form, threatening to make abuses of concentrated economic power part of everyday life.

The final category of market failure to be mentioned here concerns *externalities*, that is, consequences of exchanges *external* to the exchanging parties.¹¹ The argument for the 'invisible hand' presented above abstracted from effects of production and distribution on 'third parties', that is, effects that are not 'internalised' as benefits or costs of the transacting agents. These effects are pervasive and significant in capitalist market societies.

From the producer's standpoint, costs of production must be weighed against their expected monetary returns from the sale of a product. From the purchaser's perspective, the key variables are the benefits from using the purchase relative to what it costs to obtain. In the standard view transactions tend to be freely undertaken when both parties judge that their resulting benefits will exceed their costs. But what if there would be considerable benefits from production, but they are widely dispersed to third parties who do not contribute to the monetary returns of the producer? When there are 'positive extern-

11 'Externalities' is a widely accepted term in economics. It is profoundly misleading, given how intrinsic to social life in market societies are the phenomena that the term refers to.

alities' like this the invisible hand breaks down. There is a strong tendency for such goods to be underproduced in the sense that if more were produced the aggregate social benefits would significantly outweigh the costs of production.¹²

The opposite problem arises in cases of 'negative externalities'. If there are costs of production that are 'externalised' onto third parties – that is, costs that neither producers nor purchasers themselves must pay – these costs tend to not be reflected in market prices. The result is a strong tendency for goods with significant negative externalities to be overproduced, given their high level of social costs relative to social benefits.¹³ Here too no invisible hand brings about the highest feasible net ratio of benefits to costs behind the backs of market agents.

In cases of extensive positive or negative externalities liberal democratic republicans assert that government intervention in markets is warranted. Libertarians, embracing elements of classical liberal republicanism, resist this conclusion. In some cases they do not see problems where liberal democratic republicans do. If, for example, some market participants find themselves in disadvantageous bargaining positions, why would that matter so long as no force, threat of force, or fraud is committed? Any contractual exchange they agree to will still leave them better off than they were before.

In other cases, where there is in fact a danger that mutual benefits will not be attained, libertarians insist that free choices in markets deal with the problem more effectively than state interference with those choices. Companies selling 'lemons' will quickly find themselves losing business to those that don't. Adherents of this standpoint also insist that freedom includes the freedom to learn from mistakes, with the 'buyer beware!' ('caveat emptor') precept is a lesson all economic agents must learn. Regarding externalities, libertarians hold that positive externalities could be avoided if the system of property rights were adjusted to enable producers to appropriate more benefits.¹⁴ Negative externalities could be avoided if the definition and enforcement of property rights forced costs to be internalised.¹⁵

12 An investment with significant positive externalities of special relevance to this study is investment in basic research and long-term R&D without foreseeable commercial implications in the time-frame relevant to investors.

13 Harms to health inflicted on those living downwind from a polluting factory are a classic instance of negative externalities.

14 Extending the intellectual property rights system, for example, would enable those engaging in research and development to appropriate (internalise) more of its benefits.

15 Those living downwind from a polluting plant own their bodies. If pollution harms them, they have a right to sue those who have damaged their property. When owners of a pol-

At the end of the day libertarians concede that some people may still lose out from their participation in markets. But since this is a consequence of their own free actions and those of others exercising their liberty, the results are unfortunate, but not unjust. What would be unequivocally unjust from their perspective would be to attempt to avoid such results by using the coercive powers of the state to interfere with people's liberty.¹⁶

Libertarianism is ludicrously unconvincing. Those buying defective automobiles do not have an opportunity to learn from their mistake after the lemon they purchased crashes and leaves them dead. A group lacking bargaining power can be forced to accept agreements that give it even less bargaining power in the future, eventually becoming a separate caste locked permanently into subservience. Those suffering from pollution are all too often unable to afford to bring polluters to court. Or it may be impossible to establish legally which of many polluters caused a particular harm. And of course the future generations that will bear the greatest burden of environmental malfeasance today do not have the option of taking long-dead perpetrators to court.¹⁷

Liberal democratic republicans conclude that the political system must address market failures through regulations and legislation. Asymmetrical information between buyers and sellers can be addressed by laws mandating that the latter disclose all relevant information, by defining and enforcing consumer safety standards, and by government funding of research on important issues (like consumer safety) that would otherwise not be performed. Progressive income taxes, inheritance taxes, social programmes for the disadvantaged, laws against price gouging, strong anti-trust legislation (and strong enforcement of the legislation) help address imbalances in bargaining positions. Imbalances of bargaining positions threaten to be especially pervasive and problematic in the relationship between employers and employees. Various public policies can help 'level the playing field', including granting and enforcing rights to organise unions, worker safety regulations, and policies encouraging employment (the less unemployment in the economy, the stronger workers' bargaining position). Worker representation on corporate Boards of Directors has also been recommended by many liberal democratic

luting company have to pay a settlement to those they harm, the cost of polluting is internalised. Producers then have a strong incentive to not inflict the harm in the first place, just as they have a strong incentive to lessen any other internal cost. That, at least, is the argument.

16 Hayek 1976.

17 See Smith 1995.

republicans. Subsidies can be provided to encourage activities generating significant positive externalities. Special taxes can be imposed on activities that inflict negative externalities. In the worst cases, the latter can be prohibited entirely.

All advocates of liberal democratic republicanism want to make capitalist markets acceptable from a normative point of view rather than replace them with some other economic system. The main debate between more centrist liberal democrats and more progressive social democrats is where the line between acceptable and unacceptable market interventions should be drawn. Is this or that form of state action necessary to maintain freedom and equality, or counteract some tendency to market failure? Or would granting the state the power to impose this particular restriction on market activity excessively constrain the freedom of economic agents? Do policies discouraging market activities with significant negative externalities or encouraging activities with significant positive externalities truly further the social good in particular cases, or do they themselves impose social costs outweighing any benefits? Answers to these sorts of questions typically depend upon controversial assessments of controversial evidence. Liberal democrats are prone to emphasise that government regulation of markets must not interfere with their functioning to the point where individual freedom and economic dynamism are undermined. Social democrats are more prone to stress that measure designed to check pernicious tendencies to market failure must be strong enough to do the job.

Positions honestly acknowledging serious tendencies to market failures in capitalist market societies are clearly much closer to a socialist perspective than those denying or minimising such tendencies. While defeating libertarianism and authoritarianism has the utmost political importance in our reactionary period, theoretically these viewpoints are 'beneath all criticism' as much as defenses of the *ancien régime* were in Marx's day.¹⁸ From a theoretical standpoint liberal democratic republicanism (its social democratic variant in particular) is a far more serious challenge to the socialist project. If it were possible in principle for political regulations and legislation to put the worst tendencies to market failure out of play, it would certainly be reasonable to ask why there is a need to consider a socialist alternative.

Reforms (consumer safety laws, worker safety regulations, anti-trust legislation, and so on) have been instituted in the past. A constitutional democratic republic where all adult citizens have a right to participate in political activity, elect those responsible for determining the laws and regulations imposed on market activities, run for office themselves, and so on, may not always res-

18 Marx 1975b, p. 177.

ult in the very best laws and regulations. (There may not be *a* best, and even if there were, it may not be knowable.) Progressive advocates of capitalist market societies, however, believe that over time democratic constitutional republics provide more space for reasonable laws and regulations to be implemented than any feasible alternative. Whenever there is sufficient political will to institute reforms, reforms can be instituted. Who can say where the limit to reforms is found? Who can say that there is a limit? It surely makes much more sense, defenders of liberal democratic republicanism insist, to push the reform process as far as it can be pushed, than to waste time and effort on a quixotic socialist project likely to fail or, if it were somehow to succeed, likely to repeat the failures of previous socialist societies.

The power of the arguments in support of a capitalist market economy combined with a liberal democratic republican state should not be underestimated. Kant, Hegel, and many other normative social theorists have insisted that the generalised production and sale of commodities in markets creates a social space for individuals to choose for themselves the sorts of lives they wish to live, their own conception of the good life (including the freedom to choose to live a traditional way of life if they so choose).¹⁹ They are free to use whatever property they possess in whatever way they think would best help them fulfil their life plan. If they freely decide that certain goods and services offered for sale by others would contribute more to the fulfilment of their goals than certain of their own possessions, they are free to attempt to reach an agreement to trade for them. The ‘consumer sovereignty’ of market societies enables each of us to decide for ourselves whether a good would contribute to our ends enough to make it worth what it costs to purchase. Similarly, freedom of occupation allows individuals to decide for themselves what sort of work they do, where they do it, the organisation they work within, and so on. The importance of these forms of freedom cannot be dismissed.

Of course, the freedom of individuals is not unrestricted. The freedom to live the sort of life one chooses and do with one’s property what one wishes must respect the liberty, property and contractual rights of others. But for liberal democratic republicans this only reinforces the argument that a capitalist market society institutionalises freedom better than the feasible alternatives. Equality is similarly instituted when the forms of freedom just mentioned are extended to all and public policies enabling each citizen to stand as an equal in social and political life are adopted. In addition, generalised commodity production and exchange furthers human well-being through both its allocative

19 Westphal 2019.

efficiency (given any initial set of holdings exchanges occur to the point where no further mutual benefits can be won from further exchanges) and dynamic efficiency (over time product innovations and process innovations necessarily tend to enable wants and needs to be better met at lower cost).

The case in favour of a social order incorporating both capitalist markets and a constitutional democratic republic does not depend on any concrete capitalist society ever having functioned in a perfectly acceptable manner. No liberal democratic republican is satisfied with where we are today. The case rests instead, first, on the claim that serious problems besetting this social order provide a strong reason to seek political and legal changes, rather than a reason to reject capitalist constitutional republics in general. Progress has been made, and it can continue. And the defence rests on the further claim that it is extremely doubtful there is a superior alternative to capitalist constitutional republics. The plausibility of the latter thesis is strengthened when we consider the lack of freedom and well-being in social formations where slaves were forced to do the bidding of their owners, serfs had to spend much of their working lives labouring on the estates of their lords without recompense, independent producers were coerced at the point of a sword or gun to provide tribute to rulers, or a small unelected bureaucratic elite decided what was to be produced and how it would be distributed, based on systematically distorted information excluding effective feedback from those affected by their decisions. For anyone committed to a *normative individualism* making the life prospects of individual members of a social order the most important matter to consider in a normative assessment of societies, capitalist market societies would seem to warrant affirmation on the grounds that a capitalist economy, suitably regulated by a constitutional democratic state, tends to further freely chosen human ends better than any feasible alternative.

As compelling as this case has seemed to many, liberal democratic republicanism has a not so small problem: it overlooks the single most important dimension of our social world.

2 Capital: A Macro-monetary Totality

We can begin where Marx began, with the obvious fact that in capitalist market societies the goods that address social needs are generally produced as commodities for sale.²⁰ As we have seen, advocates of the standard mainstream

20 A reminder: here and elsewhere in this work I shall often write 'goods' and not 'goods and

view of capitalism hold that generalised commodity production and exchange is – in principle, at least – a matter of individuals with equal legal status freely entering contractual relationships for mutual benefits, with the constitutional republican state providing the necessary background conditions to keep tendencies to market failure in check. If reality does not fit this description, they continue, the problem lies with the failure of the state to provide suitable background preconditions for market activities.

Marx agrees that generalised commodity production and exchange institutes forms of freedom and equality lacking in slavery or feudalism, as well as a historically unprecedented innovative dynamism. But to comprehend these forms – what they can achieve, how they are limited – we need to emphasise another historically specific dimension of modern capitalism.

In all previous social forms of organising production and distribution producers were generally assigned a role in social reproduction from the start (*ex ante*, to use the Latin term). Slaves knew *ex ante* that what they produced would either be used by their owner or contribute to their own meagre subsistence. The same can be said for serfs vis-à-vis lords, peasant households vis-à-vis tribute-extracting political elites, and workers subject to the commands of a ruling bureaucratic stratum. In all these cases producers knew from the start that if food were grown, it would be eaten; if clothes were sewn, they would be worn. But when products take the social form of commodities produced for sale, the activities of producers are not socially coordinated from the start with users of their products. There is a real risk they will *not* be sold, and consequently *not* play a role in social reproduction.²¹ If buyers cannot be found, production will be socially wasted. In generalised commodity production and exchange there is also no *ex ante* coordination among producers. If one seizes too much of the market, the production of others will have been socially wasted.

When producers are separated *ex ante* from each other and from the ultimate users of their products human sociality takes the form of what we can refer to as *dissociated sociality*. This is not a ‘natural’ or ‘normal’ form of sociality. It is in fact a quite abnormal form in the history of our species, specific to modern market societies.²²

services’ when the distinction does not matter in the given context. It should be clear in such cases that ‘goods’ is to be taken in a wider generic sense.

21 If prices are lowered enough, they may eventually be sold. But if the prices are lowered to the required extent, much of the labour that produced them will still have been socially wasted in the relevant sense.

22 An important complication arises in production networks, where suppliers and enter-

If the social relationships among producers and between producers and users cannot be guaranteed beforehand, they must be established afterwards (*ex post*). Privately undertaken production must be subsequently validated as social production. This occurs when the products produced are sold for money. These products then objectively possess social *value*. 'Value', in other words, is a special property that commodities possess in systems of generalised commodity production and exchange, the property 'produced by privately undertaken acts of production that have (to some extent or other) been validated retroactively as social production by sale for money'.²³ 'Value' in this sense is an abstract property, distinct from the concrete properties making the good the particular good that it is. This is a very special sort of abstraction, not merely the product of our thinking. It is a practical abstraction, a *real abstraction*, so to speak, brought about by the social practices of generalised production and exchange.²⁴

The implications are profound. In all previous ways of organising production and distribution there was a dimension of natural uncertainty. Floods, droughts, earthquakes, and so on might prevent social needs from being addressed. There was a dimension of social uncertainty as well, due to the threat of destruction and plundering in wars, disinheritance, the predations of slave owners, the excessive extractions of landlords, the tribute demanded by warriors and emperors, and similar factors. Modern capitalism introduces something new, a radical and unprecedented level of *monetary uncertainty*.

Money in capitalism is not merely a means to make exchanges more convenient, or a goal pursued today in order to acquire goods addressing our needs tomorrow. Money is not a tool we can employ when it serves our purposes and then discard. Money is an expression of sociality when it takes the historically specific form of dissociated sociality. When Marx writes in one of the *Grundrisse*'s most striking formulations that each individual 'carries his social power, as also his connection with society, in his pocket', we are meant to take the statement literally.²⁵ *We live in the most monetarised form of social life the world has ever seen.* As mammals must have oxygen and the fish must have

prises ordering inputs from them do coordinate *ex ante*. In this case the unit of production is in effect the supply chain as a whole, in a relationship of dissociated sociality with competing networks.

23 Another way of defining the 'value' of commodities stems from a special property of money in generalised commodity production and exchange. Just as the value of any commodity is measured by money, money can be exchanged for any commodity in some proportion or other. Through the mediation of money, then, the value of a commodity can be defined in terms of its universal exchangeability.

24 Murray 2016 and Mattick 2019 offer superb accounts of these and related issues.

25 Marx 1986b, p. 94.

water, we must have money. When human sociality takes the form of dissociated sociality, means and ends become inverted. In societies incorporating generalised commodity production and exchange, money is the end of ends, the end without which pursuit of other ends is generally impossible.

This all-important claim must be examined more closely, first from the standpoint of producers:²⁶

* In generalised commodity production, private production is all for naught if it is not retroactively validated as social production through the sale of output for money. Units of production *must* make sale for money the overriding end of their endeavours in any given period or lose their investment.

* This compulsion is greatly reinforced when we consider that in market societies the inputs required for production generally take the form of commodities owned by others. If units of production hope to continue operating in the future, they *must* obtain monetary resources now. Otherwise, they will be unable to purchase the commodity inputs required for production in the following period.

* Given the competitive pressures facing units of production and distribution in market societies, these units *must* in fact strive to obtain monetary returns *exceeding* their initial investment. If they begin a new cycle with a significant lower amount of investment funds than competitors, they will necessarily tend to be in a disadvantageous position. Competitors will be better able to expand production, invest in more advanced productive inputs, increase marketing expenditures, develop promising new product lines, respond to new market opportunities, meet unexpected market fluctuations, retain old investors and attract new ones, retain key managers and workers and attract new ones, and so on.

It follows that units of production and distribution that do not systematically direct their endeavours to the appropriation of monetary returns (M') exceeding initial investment (M), tend to be pushed to the margins of social life, when not forced out of existence altogether. They *must* systematically subordinate other ends to the pursuit of monetary returns. Marx's conclusion regarding units of production and distribution in generalised commodity production is unequivocal: 'Use-values must therefore never be treated as the immediate

26 Units of production can distribute, that is, sell, their output to final users themselves, or they can sell it to distributors acting as middlepersons between them and final users. Given the prevalence of the latter, it would be accurate to always write the more cumbersome formula 'units of production and distribution' here and elsewhere in this work. But when adding 'and distribution' would not affect the discussion in any substantive way I shall often omit it.

aim ... nor must the profit on any single transaction. [The] aim is rather the unceasing movement of profit-making'.²⁷ Marx's technical term for 'the unceasing movement of profit-making', is the *valorisation of value*. In addition to a *commodification imperative* ('Products must take the form of commodities!') and an imperative to *monetise* ('Commodities must be sold for money!'), in generalised commodity production and exchange units of production are subject to the *valorisation imperative*: 'The initial investment (M) must be transformed into a greater M''

We turn next to the standpoint of consumers in generalised commodity production and exchange. All social theories incorporating the standard view assume that the ultimate goal of commodity production and exchange is to address human needs through consuming commodities. The 'father' of modern economics, Adam Smith, asserted in fact that 'consumption is the sole end and purpose of all production', regarding this thesis as 'so perfectly self-evident that it would be absurd to attempt to prove it'.²⁸ For Marx too a commodity has value in modern capitalism only if it addresses a social need. (In his terminology, a commodity cannot have *value* if it lacks *use value*.) But from Marx's standpoint Smith's claim is not merely not self-evident. It is false. Consumption to address needs is itself subordinate to the end and purpose of profit-making:

* The goods and services required to address human needs generally take the form of commodities owned by others who demand money for them. Those who hope to consume them *must* first acquire the money required to acquire them. Where does this money come from? In general, individuals *must* acquire it through association with units of production or distribution whose 'aim is ... the unceasing movement of profit-making'. Whatever form this association takes, from working for a wage to 'capital gains' from investments, the ability of social agents to address their human needs generally depends on whether the units of production and distribution with which they are associated attain the (inhuman) end of an M' exceeding M. This objective dependence gives the latter an objective priority over the former.

* Human needs addressed within generalised commodity production and exchange are systematically restricted to those that can be addressed by goods or services in the form of commodities. This is only a subset of all needs. While vast amounts of social resources are devoted to developing technologies that increase the production, transportation, and sale of commodities, human needs that cannot be not effectively addressed by commodity purchases – for

27 Marx 1976, p. 254.

28 A. Smith 1976, p. 155.

clean air, meaningful work, truly standing as an equal in social life – tend in contrast to be dismissed as a secondary in practice (if not always in words) when not ignored altogether.

* Further, needs that could be addressed (whether adequately or not) by commodities, are in general only addressed when backed by sufficient purchasing power. It is not demand that matters in markets, but *effective* demand. The needs of those lacking purchasing power simply do not count. The needs actually relevant to generalised commodity production and exchange are therefore in fact limited to a subset of a subset of human needs.

Billions are spent to develop technologies to provide the wealthy an opportunity to be propelled into space; next to nothing is devoted to developing technologies to clean up environmental wastes in poor communities. This is a systematic pattern, and it is the pattern, rather than the narcissism of billionaires, that is more troubling. There is no mystery why a study of nearly four million scientific articles found that ‘The global burden of disease accounts for *none* of the distribution of total health research.’²⁹ The market for medicines for afflictions of the wealthy is far more profitable than for the diseases of those in poorer regions. We also do not need to ask why the rate of product innovation has been so rapid in the financial sector, where devices now allow a trade order in Sydney to be delivered to Chicago in four billionth of a second.³⁰ Being able to make a speculative bet a nanosecond before competitors matters very much more to wealthy investors than ‘the global burden of disease’. The valorisation imperative (‘M must become M’!) imposes these restrictions, providing further evidence of this imperative’s objective priority over meeting human well-being.

* When individual agents purchase goods and services for consumption, their intention is to address their needs. But the objective social reality of their actions goes beyond this intention. Their purchases socially validate the privately undertaken endeavours of units of production and distribution. Their actions are thereby incorporated within a process that has profits as its ultimate goal. From this perspective the subjective goals of social agents are objectively a means for the valorisation process to attain *its* end, a monetary return (M’) exceeding the initial money invested (M).

* After a purchase for the sake of consumption has been completed, agents whose needs have been addressed now have fewer monetary resources. In a world where money is generally required to gain access to the means required

29 Evans, Shim, and Ioannidis 2014.

30 Sprothen 2016.

to address needs, their funds *must* be replenished. And that process presupposes renewed association with processes that have monetary returns as their endpoint.

The monetary imperative imposed on producers and consumers calls into question the standard view (expressed in the Adam Smith passage quoted above) that C-M-C circuits are the paradigmatic units of generalised commodity production and exchange. In these circuits a commodity (C) is exchanged for money (M) that is then used to purchase a different commodity (C) whose subsequent consumption will address some want or need of the purchaser. That agent (or agents) will then have to engage in different circuits to address different needs (or the same needs at different times). They will still be the same agents. The circuits, however, are discrete, discontinuous with other circuits.

For Marx, in contrast, the paradigmatic units of generalised commodity production and exchange are M-C-M' circuits, where some initial amount of money (M) is invested in the production of commodities (C) that are then sold for a greater monetary return (M'). This circuit does not end with the purchase of a commodity for consumption. It ends with money, and the same considerations that drive the transformation of M into M' drive the M' culminating one sequence to serve as the basis for a new M in a subsequent sequence. A successful valorisation process, in other words, does not conclude. It is reproduced indefinitely over time. More accurately, it tends to *expand* indefinitely over time, since the same competitive pressures that mandate striving for M' mandate striving for an even greater M'' in the next circuit of production and exchange, and then to yet greater M''', M''', and so on. This gives the valorisation process as a whole a *substantiality* that circuits of exchanging ending in consumption lack. The valorisation process maintains its identity as it expands over time, even as persons, groups, and entire communities, come into existence and pass away.

To speak of a M-C-M' circuit reproducing and expanding over time is to say that value maintains its identity as it proceeds from the form of money to that of commodities and back again. In this sense value becomes a sort of 'subject' or 'self-moving substance':

[B]oth the money and the commodity function only as different modes of existence of value itself ... [Value] is constantly changing from one form into the other, without becoming lost in this movement; it thus becomes transformed into an automatic subject ... [V]alue is here the subject of a process ... [T]he movement in the course of which it adds surplus-value is its own movement, its valorisation is therefore self-valorisation ... [V]alue

suddenly presents itself as a self-moving substance which passes through a process of its own, and for which commodities and money are both mere forms.³¹

Marx's term for this value in process is '*capital*'. We can refer to individual M-C-M' circuits as units of capital. In *generalised* commodity production and exchange, the capital circuit is generalised as well. All the intersecting circuits of capital together form what can be called a macro-monetary circuit on the level of the society as a whole.³² From this perspective 'capital' refers to an organising principle of society as a whole.

Capital, value in process, is not a 'thing' in the sense that chairs or tables are things. It is not separable from social agents and their activities (investing, producing, selling, using, and so on). Nonetheless, there was a reason Marx named his masterwork *Capital* and not *Capitalists*. When social relationships are organised in the historically specific form of dissociated sociality – when, in other words, generalised commodity production and exchange is central to social reproduction – then a new region of social ontology emerges with specific properties, relations, and tendencies, the realm of capital, with its ceaseless drive to expand over time.

'Ontology' is a technical term in philosophy referring to what things are 'in the primary sense'. Marx's underlying ontological theory can be termed *emergent materialism*. In emergent materialism 'higher' order levels are dependent upon lower levels without being reducible to them, the former having their own distinct properties, relationships, and tendencies.³³ Biological organisms, for example, are inseparable from the cells that make them up. But the specific ways cells are organised results in the emergence of a distinct ontological region, with specific properties, relations, and tendencies.

'Materialism' in social theory conveys that human life is not fundamentally separate from the natural world. We are natural creatures 'all the way down'; we do not possess some sort of 'spiritual substance' justifying thinking of ourselves as transcendent beings. But neither can social life be reduced to the laws of physics, chemistry, or biology. Once biological evolution reaches the point where the material practices of animals with big brains are coordinated through language, a new region of existence emerges, distinct if inseparable from other realms of nature. Processes of social evolution commence, with

31 Marx 1976, pp. 255–6.

32 Moseley 2015.

33 Bhaskar 1979.

a far more accelerated rhythm than the temporality of biological evolution. Social interactions are now organised in qualitatively diverse ways in different times and places, including historically specific social forms of production and exchange.

Marx saw that when social life is organised in the historically specific form of the dissociated sociality of generalised commodity production and exchange, a new dimension of the social world emerges, the value dimension where capital is value in process, taking on in turn the form of commodities and money in an inexorable drive to augment value. While capital depends completely on the social relations of human beings, it emerges as a distinct ontological level in social evolution, possessing distinct properties, relations, and tendencies. This non-human 'thing', capital, is in a real sense 'above' society, with the power to shape human life, even if social agents are typically not consciously aware of capital as an alien power over them. This concept of capital is a profound contribution to social ontology, still very much underappreciated.

In mainstream economics, the business press, and everyday speech in capitalist societies the meaning of the term 'capital' is fluid to the point of incoherence. In the expression 'capital goods' it refers to the physical objects that play a role in the production and distribution of goods and services over the course of a number of cycles of production and distribution. 'Human capital' refers to capacities of persons that makes their hiring an attractive option to employers. 'Cultural capital' is a matter of knowledge and expertise regarding topics of special interest in a given community or sub-community. 'Social capital' refers to the level of trust and respect in a community enabling social cooperation to occur without having to depend on either external reward or the threat of coercive power. All of these meanings commit a profound category mistake. They all apply a category referring to the historically specific *value* dimension of modern capitalism to phenomena found throughout human history. Physical tools, human education and training, embodied knowledge and expertise, familiarity with cultural forms, and trust and respect have played important roles in pre-capitalist societies. If we are fortunate enough to survive capitalism, they will play a role in post-capitalist societies as well. Referring to them as forms of 'capital' confuses transhistorical features of human life with the historically specific forms of modern capitalism, thereby making those historically specific forms appear as 'natural'. They are not naturally capital; they become capital only when incorporated into the process Marx referred to as 'the self-valorisation of value'.

Other usages of the term are more successful in avoiding that error. The term 'capital gains' refers to an increase in the prices of stocks, bonds, or other sorts

of financial securities; 'investment capital' refers to the purchase of means of production as private property of the investor or the purchase of a financial asset, such as an equity holding or a bond promising to provide a share of a firm's returns and capital gains. These are for the most part historically specific to capitalism and referring to them as forms of 'capital' is more appropriate. But even then they are specific forms taken by capital. They are not capital 'in the primary sense'.

Marx's concept captures the general form of capital as a unified process maintaining itself in different forms over time as it moves on the aggregate level of society from M to M' over and over, again and again. Capital in this primary sense is invisible in the standard view of capitalism. That is a fatal flaw, and fatally infects every position in social theory incorporating that view.

Marx's earliest writings vehemently criticised accounts of social life projecting a transcendent non-human power above the society while proclaiming that *its* acts, and not the acts of human subjects, ultimately explain the social world.³⁴ Isn't Marx's own concept of capital guilty of the same error? Doesn't that concept also reify human activities (buying, producing, selling, using), that is, conceptualise them as the acts of some weird sort of thing, a bizarre transcendent non-human being? Isn't this talk of capital as a non-human 'automatic subject', a 'self-moving substance' standing above human society, proof that Marx himself was not adequately inoculated against metaphysical non-sense?

Having written those early writings Marx could not have been unaware of just how bizarre his concept of capital sounds. The problem is that the social world we live in is far more bizarre than we ordinarily recognise. If we miss or reject this dimension of Marx's thought, we will miss just how radical his thinking is. Marx does not simply take a different position on the standard issues. He makes visible what other social theorists cannot see.

For the sake of contrast, we can briefly return to liberal democratic republicanism and its two main variants. While adherents of both centrist liberal democracy and the more progressive social democracy reject the view that social life is a mere aggregate of individuals pursuing their private interests, both accept that the freedom of market societies enables individuals to pursue their own conception of the good, typically in associations with others sharing that conception, constrained only by the imperative to respect the equal rights of others to do the same. Accordingly, all liberal democratic republicans

34 This is the basis of his rejection of Hegel, based unfortunately on a serious misunderstanding of the latter. See Smith 2020b, 2014.

reject ethno-nationalism, and any other position that defines the good of the community as a whole in a way that affirms some of its members and excludes others. They defend instead a 'thin' conception of the good on the level of the whole society, centring on fundamental democratic social norms and strong support for the institutions and practices that further those norms, including elections, parliaments, the government, the law, and disinterested expertise, all based on universal civil rights.³⁵

Liberal democratic republicanism presupposes a two-tiered social ontology, with individuals and society in a dialectic of parts and whole, each presupposing and presupposed by the other. This familiar framework is not sufficient for the comprehension of capitalist market societies. When social relationships are in the form of dissociated sociality something strange occurs. The relationship between those who contribute social labour to society and those who use the output of that social labour to address their wants and needs cannot be established directly as a social relationship. It is instead mediated by a direct relationship between things, specifically, the relationship between commodities and the money that retroactively confirms both that these commodities have social value and that the privately undertaken labour producing them was (to some degree or other) social labour. Marx refers to this state of affairs, where social relationships cannot directly appear as social relationships, but only in the indirect form of relationships among things, as the *fetish character* of commodities and money. The circulation of commodities and money forms a unified process. 'Capital' is the proper term for the underlying identity taking on different forms of money capital and commodity capital in the course of its circuit.

In the standard view commodity and money are incorporated into social ontology in the subordinate status of things that individuals use and that contribute to the material reproduction of the society as a whole. But this circulation of things in M-C-M' circuits is not subordinate in capitalist market societies. It imposes impersonal demands on the social world and the individuals within it. These demands – Commodify! Monetise! Valorise! – leave no individual life plan or social norm unaffected. In this sense 'capital' is a material reality warranting acknowledgement as a third tier (so to speak) of social ontology. Marx's talk of capital as a sort of 'subject' is based on the fact that there is a real 'something' subjecting both individuals and the society as a whole to these demands. Capital is not a thing, like a table or a chair, nor is it like a per-

35 See the discussion of civic virtue and acceptable forms of patriotism in Wolf 2023a, pp. 321–7.

son or a society. Capital is the form that social relationships take when human sociality takes the bizarre historically specific form of dissociated sociality. Capital then dominates the society it has emerged from. As a unified process of circulation of different things with a fetish character (commodities, money), capital too has a fetish character.

Since the circulation of things that dominates the social world and the individuals within it emerges from the social relations of that world and those individuals, and it would completely dissipate into nothingness were those social relations to be transformed. In the meantime, however, the impersonal domination of capital's imperatives must be acknowledged as a social fact, a defining feature of the social ontology of capitalism.

Liberal democrats and social democrats are correct (in principle, at least) that in capitalist market societies individuals and associations of individuals have the freedom to pursue their own conception of the good. But only those particular conceptions of the good that further (or are at least compatible with) the good of capital tend to prosper. Those pursuing ends incompatible with capital's goal of profit-making tend to be pushed to the margins of social life or eradicated.

Defenders of both forms of liberal democratic republicanism are also correct that the societies they regard as legitimate include social norms defining a conception of the social good. But it is subordinated under the inhuman good of capital, valorisation, the transformation of M into M' on the aggregate level. Social norms that further (or at least compatible with) this end tend to flourish. Those that do not tend to be either modified so that they do, marginalised, or forced out of existence altogether.

Being subjected to the alien power of capital is itself a sufficient reason to struggle for an alternative social world in which individual conceptions of the good and social norms are not systematically constrained and distorted in this manner. It is, however, only the most basic justification for this conclusion. Others emerge as the implications of capital's reign are drawn out.

3 The Case against Capitalism: Essential Determinations and Systematic Tendencies

3.1 *The Capital/Wage Labour Relationship*

$M-C-M'$ is a compressed representation of the basic circuit of capital. The fuller representation is $M-C-P-C'-M'$. The circuit still begins with investment capital (M). These funds are used to purchase the commodity inputs (C , commodity capital) required for production. The phase of capital in production (P) follows,

resulting in commodity outputs (C', inventory capital) that are anticipated to exceed in monetary value the value of the investment to produce them. This anticipation is validated when the output is sold for a monetary amount (M', realised capital) exceeding that investment. Capital 'in the primary sense' is the unity of this process, maintained in the different forms of capital taken on and left behind in the course of the expanded circuit.

Here too there is an immanent drive for capital to expand over time, with the M' at the conclusion of one circuit providing the basis for a new and larger M in the next. Here too the intersecting circuits of capital together form a macro-monetary circuit on the level of the society as a whole, beginning with the aggregate amount of money capital initially invested in the society in a given period, progressing through the aggregate production and circulation of commodities, and culminating at the conclusion of the given period with aggregate returns from the sale of the produced commodities. Here too social relationships within and between social actors are mediated by the circulation of things (commodities, money, capital). But we can now explicitly consider social relationships that were previously left implicit. As stressed above, in generalised commodity production and exchange individuals are not truly free to decide whether or not to seek monetary resources. A society incorporating generalised commodity production is a *monetarised* society. The means of subsistence social agents require generally take the form of commodities owned by others. To obtain access to them, money must first be acquired. In generalised commodity production and exchange that generally happens through some association with units of production or distribution whose 'aim is ... the unceasing movement of profit-making'.³⁶

For the purposes of comprehending the dominant structural tendencies of capitalism Marx focuses on two main ways of being associated with units of capital: as owners, with rights to share in the distribution of the monetary surplus, or as those hired by units of capital in return for a wage. The initial moment of the capital circuit, M, could be more fully represented as:

M
[]

36 Marx 1976, p. 254. Of course, units of production and households in capitalism can also obtain monetary resources through credit. Taking that into account would not affect the point being made here, since credit tends to only be extended to units of production foreseen to be profitable, or to members of households foreseen to obtain income (wages, salaries, dividends, capital gains, etc.) from association with such units.

to express the social relationship between those who enter a given cycle of valorisation with a critical mass of monetary funds (M) for investment and those who lack such funds, represented by the empty space between the brackets below the line.³⁷

The term 'dissociated sociality' was initially introduced to refer to the lack of *ex ante* coordination among units of production and between these units and users of their products. We can now note another sense of the term. Social agents lacking access to means of subsistence and the means of production necessary to produce means of subsistence (both in the social form of commodities owned by others) are 'dissociated' from the objective material conditions of human life. The vast majority of social agents are naked individuals in this sense; only a relative few have the monetary resources to avoid this form of dissociation. There is nothing 'natural' about this state of affairs; it is a historically specific form of sociality.³⁸

In the second phase of the expanded capital circuit, those with investment funds (or their agents) purchase commodity inputs (C). Some of these commodities are means of production sold by other units of production. Crucial here, however, is the purchase of a second, quite different, category of commodity input, labour power acquired in return for a wage.

For mainstream social theorists, the wage labour contract is (in principle, at least) a free agreement among equally free agents. No direct personal coercion

37 Marx was well aware that the social world is far more complex than this. There are, for instance, executives appointed by investors to defend their interests, professionals receiving a 'salary' rather than a 'wage', 'dependents', unpaid care givers, and so on. Marx also was well aware that slavery, bonded labour, and serfdom persisted in his day. In Marx's methodological framework, however, not all the essential determinations of concrete capitalism are examined at the same time. Creatively adopting Hegel's systematic dialectic, Marx begins with a level of abstraction where only the most abstract and simple determinations of capitalist market societies are considered and then proceeds step-by-step to incorporate more concrete and complex levels of determinations (Smith 1990). To complain about Marx's overlooking of complex and concrete determinations at the beginning of his systematic theory is to admit one does not understand his methodological framework.

38 In his section on 'original accumulation' at the conclusion of Volume I of *Capital* Marx provides a sketch of the historical processes leading to the social division between those possessing a critical mass of investment capital and those without, stressing the historical specificity of both the processes and their outcome. The key to this complex story is that peasant households required access to a commons to maintain their status as independent producers. Despite the established rights of these households to such access, lords enclosed it by force. The social reproduction of independent peasant households was undermined, forcing most members to sell their labour power for a wage in order to obtain means of subsistence (Marx 1976, Part Eight).

is involved; wage labourers are free to seek employment from whomever they wish. But those who do not have extensive monetary holdings are 'dissociated' from the objective material preconditions of human life. They *must* somehow obtain money to gain access to the goods and services they and their dependents require. This means in effect that they *must* sell their labour power as a commodity to those who own and control investment capital.

This 'must' does not refer to the sort of personal coercion that occurs when one individual commits force or fraud against another, nor is it the result of a coercive state apparatus commanding some people to put their human capacities at the disposal of state officials. But neither is it merely an unfortunate 'natural' condition of human life, or something that randomly occurs. It is a structural feature of capitalist market societies, a systematically recurrent pattern generated by the historically specific forms of generalised commodity production and exchange.³⁹ In a monetised economy, those lacking sufficient money capital are generally *forced* to sell their labour power to some unit of capital or other as a result. This is a *structural coercion*, due to the social forms in place.⁴⁰ Impersonal coercion is still coercive.

Once commodity inputs have been purchased, investors (or the managers they appoint as their agents) now have the right to determine how they shall

39 Even slaves and serfs typically had direct access to the objective preconditions of human life (means of subsistence and the means of producing them); masters fed slaves, and serfs were able to farm their own land part of the time.

40 There is another problem here as well for advocates of the standard view of market societies. In that framework persons are conceptualised as ends in themselves and not objects to be exchanged. (The freedom of persons to exchange objects does not extend to a freedom to sell ourselves into slavery, since that would undermine our status as ends in ourselves.) Doesn't wage labour treat persons as objects of exchange? To remove this worry, some theorists stress the temporary nature of the wage contract, justifying the temporary purchase of a person's capabilities from using an object as a means. Hegel, for example, argues that their right to merely temporary use of labour power prevents the purchasers from owning wage labourers, allowing the latter to retain the status of autonomous persons (Hegel 2008, p. 73/#62; pp. 78–9/#67). This is a weak argument, especially when we take into account that the time wage labourers are effectively subject to capital can take up most of their adult waking life. Consider a wage labourer who spends 9 hours at a workplace, 2 hours in transit to and from the workplace, an hour preparing for the workday, another recovering from it physically and psychologically, a further 3 hours engaged in tasks required for the labour power of this person (and any dependents) to be available in the future (shopping, cooking, eating, cleaning, etc.), and sleeping 8 hours. That would be all 24 hours of the day directly connected to employment as a means for others' gain. If this person were to carve out a little time of their own, how much of a substantive difference would that really make? (I note in passing that capital's colonisation of leisure time is one of the distinguishing features of contemporary capitalism. See Chapter 9 below.)

be employed in the third phase of the circuit of capital, capital in production (P). Owners or their agents determine in specific what outputs will be produced, what technologies will be employed, how the production process will be structured, and so on. This does not make workers whose labour power has been purchased as a commodity passive automatons. They are capable of various forms of resistance to dictates imposed by representatives of capital.⁴¹ In some cases, they may win a measure of autonomy in the labour process; in some cases, it may be in capital's interest to grant them a measure of autonomy. Nonetheless, in a very real and substantive sense wage labours are for most of their adult waking life subject to *social domination* in the labour process, subject to the authority of representatives of capital. Those exercising this authority in workplace communities are not accountable to those over whom their authority is exercised, but to the controlling investors whose agents they are.

At the conclusion of the production process a set of commodity outputs (C') results. If all goes as investors anticipated, these commodities can then be sold profitably for a monetary return (M') exceeding initial investment, bringing the given circuit of capital to its conclusion. It is true that all societies in human history have produced a social surplus, that is, goods and services exceeding what the immediate producers require to reproduce themselves over time. (The very old, the very young, the infirm, and so on, could not have been cared for otherwise.) Only in capitalist market societies, however, does the social surplus primarily take the historically specific form of *surplus value*, the difference between M' and M on the aggregate level of society as a whole.

In a broad sense of the term, those owning production enterprises in capitalism 'exploit' all the commodity inputs they have purchased, using them as means to attain augmented monetary returns on their investments. If, however, our concern is with the social relationship at the heart of the capital circuit, a narrower and more critical sense of the term is called for. Wage labourers will be hired if and only if those possessing investment capital (or their agents) foresee that workers' efforts will result in a surplus value that investors are able to appropriate. The wage labourers who collectively produce this surplus have no more control over its appropriation and allocation than slaves or serfs had over the social surplus they produced for their masters and lords. In the only sense of the term relevant here, wage labourers are *exploited*. 'Capital ... valorises itself through the *appropriation of alien labour*'.⁴²

41 Resistance can extend outside the workplace. A large part of the first volume of *Capital* is devoted to the ultimately successful political struggle for legislation limiting the length of the working day in nineteenth-century England.

42 Marx 1986b, p. 233.

The term 'exploitation' would not be applicable if the surplus value appropriated by representatives of capital were an appropriate reward for a contribution to social production, or for the financial risks of investors. But they are in a position to make this 'contribution' and take on those risks solely because of the social power granted to those who own and control investment capital by the property and production relations of capitalism. These property and production relationships cannot be either explained or justified by 'contributions' and 'risks' that presuppose those very relationships. To attempt such an explanation or justification is to fall into the crassest of circular arguments. The ability to appropriate surplus value must be explained instead by the social power over the living labour of others granted by ownership and control of money capital. Those lacking monetary reserves lack access to the objective material conditions of human life, making them from the start subject to the social power of the investor class and, ultimately, to the impersonal power of capital. Capitalist investment in production, then, is not a 'contribution' to production, but rather an exercise of the power to grant or withhold permission for production to take place, a power bestowed on them by the social relations of capitalism.⁴³

Although most representatives of capital lack the category, much technological change in the workplaces in effect aims at increasing the rate of exploitation, the difference between the economic value workers create through their living labour and the value they receive back in the form of wages. Machines governing the assembly line can be sped up, at the cost of health-impairing stress, avoidable injuries, and even death.⁴⁴ Technologies that deskill workers will be sought when they enable more costly skilled workers to be profitably replaced with cheaper options. If workers are sufficiently organised, they can resist intensification of the labour process and deskilling. In response, however, technologies automating production will tend to be introduced as soon as they are feasible, in part in the hope of undermining such resistance. Generalising, Marx writes,

43 No one defending the standard view of capitalism would say that those having the power to impose a central plan in the command economies of so-called state socialism received special material benefits because of their 'contribution' to production. The production and property relations of so-called 'state socialism' granted members of the *nomenklatura* the social power to give or withhold permission for production to occur, and so the exercise of that power cannot justify those relations without falling into a circular argument. The point is general, holding for slave owners in slave societies, feudal lords in feudalism ... and those possessing a critical mass of investment capital in capitalism. See Schweickart 1993, Chapter 1.

44 Marx 1976, pp. 533–64; Holdren 2020.

(M)achinery does not just act as a superior competitor to the worker, always on the point of making him superfluous. It is a power inimical to him ... It would be possible to write a whole history of the inventions made since 1830 for the sole purpose of providing capital with weapons against working-class revolt.⁴⁵

Fostering divisions within the working class is another powerful weapon. 'Wage labour' is, of course, an abstraction. Wage labourers are concrete individuals, with different features and social identities. Insofar as divisions among them aid exploitation, Caesar's principle of 'divide and conquer' comes into play in modern capitalism. Features that distinguish groups of workers from other groups will regularly be mobilised to divide them against each other. Marx points out, for example, that women were hired by manufacturers in the course of the industrial revolution as a strategy for lowering wages.⁴⁶ He notes as well how ethnic, religious, and national divisions weakened both Irish and British workers vis-à-vis representatives of British capital, and how the structural racism separating workers considered 'white' in the US from African Americans hampered the struggles of both for emancipation from coercion, domination, and exploitation.⁴⁷

45 Marx 1976, pp. 562–3. The sort of technological changes affecting workplaces in the twenty-first century – technologically-induced speed-ups, technologies enabling deskilling, automation of good paying jobs, transportation technologies enabling capital flight away from regions where workers are relatively well paid and labour organisations are relatively strong, and so on – are clearly analogous to those Marx discussed in *Capital*. The main difference is that now technologies can be used to shift the balance of power in the capital/wage labour relationship in capital's favour far more quickly and on a far greater global scale than the technologies of the nineteenth century were able to do. The process continues as artificial intelligence takes over routinised forms of professional knowledge work. As workers are forced out of well-paid positions, the supply of workers competing for the remaining positions expands, putting intensified downward pressure on wages. New platform technologies enable new forms of precarious employment to emerge, including supposedly 'independent' contractors connected to customers through the mediator of the platform owner, who takes a significant cut without providing health care, pensions, or other benefits. (In a recent study of the 'advanced' capitalist countries belonging to the Organisation for Economic Cooperation and Development [OECD], McKinsey Global Institute found that 'Part-time paid work was the primary driver of the increase of overall employment between 2000 and 2018. Its share rose ... by an average of 4 percentage points, equivalent to 29 million jobs, while that of full-time employment declined by 1.4 percentage points'. Manyika et al. 2020, p. 5).

46 Marx 1976, p. 601.

47 Marx 1988b, pp. 473–5; Marx 1976, p. 414.

'In principle, at least', as the all too necessary qualification goes, the logic of capital may be an homogenising logic of formal equality and indifference to personal and group distinctions unrelated to the production of value and surplus value. In practice, however, the social pathologies of racism, sexism, ethno-nationalism, religious prejudice, and so on, are *not* at all unrelated to the production of value and surplus value. Capitalism may not have created these divisions, and every representative of capital may not intentionally exacerbate them as an accumulation strategy. Nonetheless, when mobilising and exacerbating social divisions aid accumulation, those divisions will tend to be mobilised and exacerbated in a system governed by the valorisation imperative. Whether this is done thoughtlessly, or on the basis of sincere but mistaken beliefs, or in utter cynicism, does not matter very much. The same social pathologies are unleashed regardless.

In this context we must also consider the ample evidence that past a certain point the well-being of workers is furthered more by having time for relationships with family, friends, and acquaintances, for participating in community life, and for projects of one's own choosing, than by increased material consumption. In capitalism, however, productivity advances that could enable the same output to be produced with a shorter workday tend to be used instead to increase output to be sold for profit:

John Stuart Mill says ... 'It is questionable if all the mechanical inventions yet made have lightened the day's toil of any human being'. That is, however, by no means the aim of the application of machinery under capitalism. Like every other instrument for increasing the productivity of labour ... The machine is a means for producing surplus-value.⁴⁸

The level of output that took workers 40 hours to produce in 1990 now requires less than 29 hours, but there has been no reduction of the alienating work demanded by capital's representatives.⁴⁹ That would not be true of a system with human well-being at its core.

Capital has been defined above as an 'automatic subject' and 'self-moving substance' that takes on and leaves behind different forms in the course of M-C-P'-C'-M' circuits. When the transformation of the aggregate investment capital at the beginning of a period to the aggregate realised capital at its conclusion is considered, capital can be characterised as a macro-monetary totality. Since

48 Marx 1976, p. 492.

49 Rauch n.d.

the M' at the conclusion of one circuit forms the basis for a new M at the start of the next, we may speak of the reproduction of capital over time. The next step in the Marxian critique of the standard view of capitalism is to comprehend how the reproduction of this macro-monetary totality is simultaneously the systematic reproduction of the capital/wage labour relationship (see Figure 3 below).

The commodity outputs with a value of C' include goods for the consumption of wage workers and their dependents. After wages have been spent on purchasing these goods (with perhaps a small amount set aside for savings), workers find themselves at the start of the next macro-monetary circuit once again without access to the material preconditions of human life. Once again, wage goods take the social form of commodities owned by others. Once again, workers lack the monetary reserves required to acquire them. Once again, they *must* obtain monetary resources to gain access to the commodities they require. And so, they *must* once again sell their labour power to some representative of capital or other in return for wages.

The owners and controllers of capital, in contrast, have as a class (if not in each individual case) obtained a monetary return enabling them to reinvest in the following circuit, even after extensive funds have been deducted for their personal consumption of commodity outputs. From the standpoint of both wage labour and capital, then, the process of capital's valorisation as a macro-monetary totality is simultaneously a process reproducing the capital/wage labour social relation.

Advocates of the standard view are not mistaken when they insist that generalised commodity production in principle involves a system of formally free transactions among formally equal individuals. But this form of freedom is a limited one, occluding the heart of the matter:

It is [not] a mere accident that capitalist and worker confront each other in the market as buyer and seller. It is the alternating rhythm of the process itself which throws the worker back onto the market again and again as a seller of his labour-power and continually transforms his own product into a means by which another can purchase him. In reality, the worker belongs to capital before he has sold himself to the capitalist. His economic bondage is at once mediated through, and concealed by, the periodic renewal of the act by which he sells himself, his change of masters, and the oscillations in the market-price of his labour.⁵⁰

50 Marx 1976, p. 724.

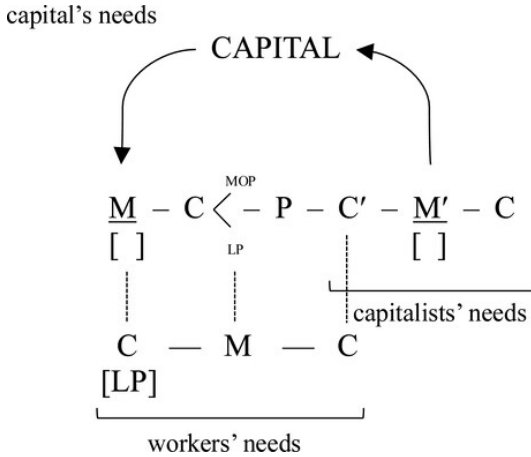


FIGURE 3

Capital's reproduction and the reproduction of the capital/wage labour relationship

Advocates of the standard view are also not mistaken when they speak of the needs of individuals and households being addressed through the purchase of commodities produced by units of capital. But the purchase and consumption of commodities by workers (and other members of their households) in C-M-C circuits, and by owners of capital as well in M'-C exchanges, are subordinate moments within a macro-monetary circuit of capital in which capital's need for valorisation has priority:

Marx's concept of capital is complex. On the one hand, once social relations take the historically specific form of dissociated sociality (that is, once commodity production and exchange has been generalised) capital emerges as an alien power imposing its imperatives on every nook and cranny of the social world. When we examine the nature of this seemingly absolute power more closely, however, its power turns out to be also an absolute *nothing*.

Capital is pure form. *Any* content (any material, activity, idea) that can be incorporated directly or indirectly in the valorisation process falls under its reign. This in principle includes *any* materials, activities, or ideas that can be commodified, monetarised, and incorporated in a valorisation process. But that is the same as saying capital has *no* content of its own. We can – we must – continue to speak of capital as an 'automatic subject' and 'self-moving substance', since that reified speech captures our reified world. But we must simultaneously recognise that *all capital's powers are appropriated powers*.

First and foremost, the productive powers of capital are nothing but the collective creative powers of living labour in an alien form. As Marx writes, 'All the powers of labour project themselves as powers of capital'.⁵¹ Again, 'The devel-

⁵¹ Marx 1976, pp. 755–6.

opment of the *social* productive forces of labour and the conditions of that development come to appear as the *achievement of capital*'.⁵² And once more: 'The social productive power which arises from cooperation [of workers] is a *free gift*'.⁵³

The powers living labour mobilises in the course of capital circuits also come to appear as powers of capital. These include:

- * the productive powers of machinery;
- * the productive powers of nature;⁵⁴
- * the powers of scientific-technological knowledge;⁵⁵ and
- * the creative powers stemming from collective cultural knowledge bequeathed to us in common from past generations and from contributors to the 'knowledge commons' today.⁵⁶

I previously noted how Marx's concept of capital is a profound contribution to social ontology. We can now better see just how complex his understanding of capital is. Physicists have struggled with comprehending a world where subatomic particles are somehow at once both particles and waves. Social theorists face an analogous paradox. Capital is somehow both an Absolute and a Nothing, both a dominant subject and a mere pseudo-subject, both a 'self-moving substance' subsuming nature and society to its imperatives and an insubstantial emptiness of mere form, living off the creative powers of social and natural agents as a vampire lives off the blood of the living.

The structural coercion, domination, and exploitation of the capital/wage labour relationship, the mobilisation of technological change as a weapon against wage labour, the tendency for social divisions to be mobilised and exacerbated as another sort of weapon, and – last, but not at all least – the

52 Marx 1976b, p. 1055.

53 Marx 1988a, p. 260.

54 Marx 1976, p. 757.

55 'Once discovered, the law of the deflection of a magnetic needle in the field of an electric current, or the law of the magnetisation of iron, cost absolutely nothing ... Science, generally speaking, costs the capitalist nothing, a fact that by no means prevents him from exploiting it ... [I]t is clear at first glance that large-scale industry raises the productivity of labour to an extraordinary degree by incorporating into the production process both the immense forces of nature and the results arrived at by natural science' (Marx 1976, pp. 508–9).

56 '[T]he capital-relation arises out of an economic soil that is the product of a long process of development. The existing productivity of labour, from which it proceeds as its basis, is a gift, not of nature, but of a history embracing thousands of centuries' (Marx 1976, p. 647). The unpaid care labour without which society would disintegrate is another 'free gift'.

vampire-like ontology of capital, all illustrate the subordination of human flourishing to the flourishing of capital. Together they provide compelling reasons to struggle for an alternative social world. There are others.

3.2 *The Tendency to Overaccumulation Crises*

Marx held that the very investments in technological change introduced to further capital accumulation (by increasing the rate of relative surplus value) tend to eventually undercut the accumulation process (by lowering the rate of profit). Marx's argument for the tendency for the rate of profit to fall is obscure, disputed, incomplete, and rests on problematic assumptions.⁵⁷ I do not wish to get lost in the thickets here. I shall instead present a reconstructed argument for this conclusion.⁵⁸

The hope of obtaining above-average profits provides a powerful incentive for new plants and firms to enter a given sector, employing more advanced technologies with a higher level of productivity.⁵⁹ With the entry of new, more productive firms and plants into a sector, the weakest of the incumbent firms are likely to go under. But it is rational from the individual standpoint of established firms to remain in operation if they can, even as their rate of profit declines to a point below their previous rate and well below the rate of the most efficient producers. They already have sunk costs from investments in fixed capital (machinery, buildings, and so on). That money has already been spent. If production were shut down, there would be nothing to show for those past investments. Given that the fixed capital necessary for continued operation is already in place, if the firms continue in operation they may be able to win at least the average rate of profit on any new investment in circulating capital (raw materials, wages, transportation costs, etc.). Also, the management and workforce of these firms also have sector-specific skills that would be difficult to duplicate in any reasonable time period were they to shift operations to a different sector, as well as established relationships with suppliers and distributors that would likely be difficult and costly to establish in other sectors within a reasonable timeframe. Local governments and universities may be provid-

57 To be specific, define the rate of profit as $r = s/[c+v]$, that is, the ratio of surplus value (s) to the sum of investment in constant (fixed and circulating) capital (c) and labour power v ('variable capital'). Divide numerator and denominator by v : $r = (s/v)/[(c/v) + 1]$. The rate of profit is now determined by the ratio of the rate of surplus value (s/v) to the organic composition of capital (c/v). The questionable assumption underlying most accounts of the so-called law for the rate of profit to tend to fall is the assumption that the rate of surplus value tends to increase at a slower rate than the organic composition of capital.

58 The following discussion is based on Reuten 1991 and Brenner 2006.

59 Marx 1976, p. 530; see also Reuten 2018.

ing the firms in question with important support (infrastructure, research, etc.) that would be withdrawn were they to cease operating in the sector. And, finally, there is always the hope that if they can just hold on long enough, they may be able to introduce innovations allowing them to leap-frog over their competitors. These considerations make it rational to remain in operation.

What is rational from their individual standpoints, however, eventually tends to generate a collectively irrational result: the rate of profit in the sector as a whole tends to decline.⁶⁰ Despite the higher rate of profit enjoyed by a relatively few newcomers, the greater number of established firms with lower rates of profit tends to bring down the average rate of profit in the sector, due to excess productive capacity in the sector as a whole. In a recession or depression it will always appear that the main problem is a shortage of effective demand, and insufficient demand must in fact always be part of a comprehensive account of economic downswings. But it does not provide an adequate account in itself, since it does not explain why capitalism is compelled to expand productive capacity beyond *any* given level of demand.

A decline in profits can be checked so long as market demand for the output of the sector increases at a faster rate than productive capacity increases due to the entry of more productive plants and the continued operation of incumbents. Sooner or later, however, the drive to innovate due to the lure of extra profits will continue to add productive capacity even as demand slows down. At some point excess capacity ('overproduction') builds up from the *overaccumulation* of invested capital.

An upswing can continue so long as overaccumulation difficulties affect only a few sectors, or sectors of relatively secondary importance in the world market. But the longer the upswing continues, the more overaccumulation difficulties will spread. Sooner or later a significant number of sectors in the core of the world market will suffer from excess productive capacity simultaneously. At that point we may speak of an 'overaccumulation crisis' on the level of the world market, manifested in an economy-wide fall in profit rates for an extended period. (Further details will be introduced in the following section.) At this point investment slows, and an overaccumulation of investment capital – a build-up of investment funds with no attractive outlet – is added to the overaccumulation of productive capacity. The greater the excess capacity, the more will be devalued or physically destroyed in an extended recession or depression.

60 This key point is simply ignored in equilibrium models employing the notion of a 'representative firm'. Treating all units of capital in a sector as identical renders essential tendencies to disequilibrium invisible by methodological fiat.

Most representatives of capital have extensive monetary resources and manageable liabilities, enabling them to live through an overaccumulation crisis with their lives relatively unaffected. Just as the benefits of upswings are not distributed in a class neutral manner, there is a class bias in the distribution of the burdens of downswings; those who benefitted little from an upswing tend to bear the greatest burdens of a later downturn. For many, life prospects are forever altered for the worse.

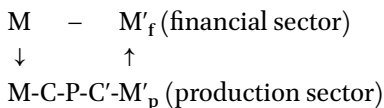
The systematic tendency to overaccumulation crises manifests the systematic subordination of human flourishing to the flourishing of capital. The human costs they inflict provide another powerful reason to struggle for an alternative social world.

3.3 *The Tendency to Financial Crises*

The commodity form cannot be generalised without money functioning as a general equivalent. Money capital is the alpha and omega points of M-C-P-C'-M' circuits on the level of capital as a macro-monetary totality as well as the level of individual units of capital. Modern capitalism is by far the most monetarised system the planet has seen.

Where does money come from? In Volume I of *Capital* Marx treats it as a gift of nature, a metal found in the ground. This will not do. No less than 'commodity' or 'value', money in generalised commodity production and exchange needs to be comprehended and explained as a historically specific social form, rather than as a phenomenon of nature.

In the more concrete and complex level of determinations of Volume III Marx notes that credit money is the specifically capitalist form of money, pointing towards how it is created *ex nihilo* as a pure social form by social entities conceptually distinct from enterprises producing commodities, banks or bank-like financial organisations.⁶¹ From this standpoint there is no sharp division between the 'real' economy and the financial sphere as is so often assumed in both mainstream and heterodox economic theories. The spheres of production and finance spheres are essentially connected from the start:



The M initially created here by the financial sector through a loan to a unit of production is the same M found at the start of the circuit of production cap-

61 Marx 1981, p. 707.

ital. The M'_f that concludes the compressed $M-M'_f$ circuit of financial capital represents the repayment of the initial loan plus interest out of the realised capital M'_p that completes a circuit of production capital.⁶² In $M-M'$ circuits of financial capitals considered in abstraction from the whole it appears that money has the magical property to produce new monetary value out of itself. That merely shows how bank capital is an extreme form of capital fetish; the underlying social relationships are invisible, appearing in the form of relationships among things. Marx's goal in the Volume III discussion of bank capital is to explain its second-order parasitical relationship with exploited wage labour. The interest a unit of bank capital receives for a loan for productive investment is a deduction from surplus value produced through the exploitation of living labour in production.

This is an immensely important point. The credit money created *ex nihilo* by banks is a 'prevalidation' by of the value expected to be produced in the course of a valorisation process.⁶³ It is not itself a 'contribution' to value production which deserves to be rewarded. It is in effect the exercise of the social power granted to banks in capitalism to grant permission to units of production capital to grant permission for production to occur.

Besides its role at the beginning of a valorisation process, credit is used to prevent or limit interruptions in that process (and to prevent what could be temporary interruptions from snowballing into major breakdowns). Prior to final sales of inventory, for example, manufacturers may need to borrow means of paying their suppliers. From the standpoint of their lenders the loans are in effect claims on value still to be realised from sale of the inventory. Here too the monetary returns appropriated by lenders can still be ultimately categorised as appropriations of surplus value produced through the agency of exploited wage labour, as Marx categorised them in Volume III of *Capital*.⁶⁴

A third role for credit in the macro-level valorisation process comes in its final moment, where the potential value embodied in the aggregate commodity output C' is realised in sale for M' , retroactively validating the concrete private

62 See Reuten 2019, pp. 103–20 and works by other 'circulationist' economists such as Augusto Graziani 2003 and Riccardo Bellofiore 2005.

63 'Banks concretely create quantities of money based on a reciprocal credit relation with their clients. More specifically, banks "pre-validate" the future production of enterprises' (Reuten 2019, p. 130).

64 This statement must be qualified, since it is also possible for returns to be won for a time from the 'capital gains' appropriated in the course of credit-fuelled financial bubbles decoupled from past, present, or future production. In Marx's day, however, the period before financial bubbles burst was relatively brief. Matters are different today, as we shall see.

labour that produced that output as (to some extent or other) simultaneously surplus value-creating social labour.⁶⁵ This raises what we may term 'the Luxemburg question': where does the delta M ($M' - M$) that socially validates surplus value production by wage labour come from?

A fairy tale about prospectors extracting additional gold from streams, or the wealthy submitting their gold hoards, in precisely the amount needed for aggregate delta M to represent additional value, is a non-starter. The answer also cannot lie with expenditures of funds received from the sale of commodity inputs. That amount is limited to the M received by units of capital and wage labourers from the sale of means of production and labour power, respectively. It therefore can at most only account for the purchase of commodity outputs with an aggregate value of M (less if there are any savings).

Luxemburg's answer is that the missing money comes from 'outside' the capitalist system, specifically, the effective demand of wealthy elites in non-capitalist regions of the globe.⁶⁶ This also will not do. This 'outside' has effectively disappeared with the extension of the world market, and capital accumulation has continued nonetheless.

A far more satisfactory answer is that the delta M required for the transformation of M into M' comes from a third insertion of credit money into the valorisation process, besides the initial creation *ex nihilo* of credit money at its commencement and loans to avoid or limit interruptions. This third allocation of credit money, like the first two, counts as a prevalidation of value. Unlike them, however, it is a prevalidation of value to be produced in a *subsequent* period. And unlike them it directly aids in the realisation of value in the present period. In other words, delta M , the difference between the money capital initially invested and the realisation of that investment in M' , is not simply the result of surplus labour undertaken in production. It results as well from an infusion of credit in the present macro-monetary circuit of capital, granted in the expectation that the debt can be repaid in the subsequent circuit.⁶⁷

65 When (as here) it is obvious that the M' of units of production capital are being referred to, the subscript in M'_p will be omitted.

66 Luxemburg 2003.

67 'In any case (and at a constant average velocity of circulation, that is, a constant average rate of transfer of money from one account to the other), accumulation of capital requires a concomitant rate of re-creation of money. ... Because banks – and banks only – create money, it is impossible for them to receive back more money (interest) than they created. Therefore the validation of the expansion of one enterprise necessarily requires the expansion of other enterprises. Thus the pre-validation of the others provides the monetary equivalent for the realisation of the surplus-value of the one, including the interest to be paid to the bank ... This is the answer to the longstanding dubious question of "where

This shows how the spheres of production and finance are not just connected externally. They are intertwined throughout the valorisation process.⁶⁸ Every circuit of production capital ultimately commences with the prevalidation of production by credit money and requires an insertion of additional credit money to be valorised. Every investment in production inherently involves financial speculation.

The role of credit in overaccumulation crises was left aside in the previous section. We can now note that cyclical upswings require that credit for investing in the most dynamic sectors (such as those commercialising a technological revolution) is widely available at relatively low cost. When overaccumulation problems begin to arise and rates of profit begin to stagnate or decline, few interpret them correctly, seeing them as merely temporary disturbances. Credit keeps flowing, productive capacity continues to expand. And even when the assumption that the slowdown is temporary must be abandoned as overaccumulation difficulties worsen, bankers and other financial agents are disinclined to cease the flow of credit. They do not want to shrink the asset side of their balance sheets by writing off loans to their borrowers, and hope that if they keep lending the costs of the slowdown will fall on other firms and *their* creditors. This is rational from an individual standpoint. But it exacerbates the overaccumulation crisis in aggregate, as other lenders follow the same reasoning and continue lending to their clients for investment. As the growing excess productive capacity squeezes profits, at some point a critical mass of units of production capital become unable to repay their loans, forcing numerous lenders into insolvency as well in a downward spiral. The greater the excess capacity, the more investment tends to be devalued or physically destroyed in an extended recession or depression.

So far, the assumption has been that the money capital created *ex nihilo* by the financial system is invested in units of production capital. But this is not the

the money comes from" so as to realise surplus-value' (Reuten 2019, pp. 115–16). Reuten's point reinforces the thesis that value is created neither in production alone nor in circulation alone, but in the dialectical unity of production and circulation.

68 In Volume III of *Capital* Marx assigned financial capital a relatively secondary place in the capitalist mode of production. Financial capital was categorised as either the result of a redistribution of a portion of the surplus value produced by industrial capital, as fictitious capital that represented the capital invested in production and distribution, or doubly fictitious speculative capital decoupled from relationship with capital invested in production and distribution doomed to be destroyed when a speculative bubble bursts and illusory fictitious valuations fall back to earth. This account is incomplete and must be supplemented by financial capital's active role in the reproduction of circuits of accumulation.

only option. Money capital can just as easily be used to fund purchases of financial assets such as land, art works, and, especially, the assets Marx referred to as 'fictitious capital' (stocks, bonds, derivatives, etc.). These investments can be made in the expectation that purchasing equity in production capitals, buying their bonds, or investing in derivatives tied to an income-generating assets, will enable financial agents to share in the surplus value produced by production capitals whose stocks or bonds or income-generating assets have been bought. But they can also be made in the hope of speculative gains from an appreciation of the prices of these financial assets ('capital gains').⁶⁹ And just as M can be transformed to M' in the circuits of production capitals when additional credit is injected into those circuits, the M invested in the purchase of a financial asset can be transformed to M' in the circuits of financial capitals when credit money created within the financial sector remains within that sector, enabling the purchase of financial assets at inflated prices.

An initial inflation of financial assets can turn into a self-sustaining financial bubble whenever a significant number of investors convince themselves that the price of one or more categories of financial assets is bound to increase in the future.⁷⁰ Widely shared optimistic estimations of the future value of these assets among investors can itself set off a self-fulfilling prophecy, as greater demand for the assets sparks a sharp increase in their prices. Those owning the assets can then use their increased (paper) wealth as collateral for more loans that increase demand for – and the prices of – financial assets. The now yet wealthier investors can then return to banks for yet another round of loans, asset purchases, and price increases. At some point the nagging thought may arise that only a fool would purchase a capital asset at such an obviously inflated price, and only a very foolish bank would lend someone money for that purchase. But as long as it is reasonable to think that a yet bigger fool will come along to purchase the asset at a yet more inflated price, it is 'rational' for an investor to purchase it now and 'rational' for a bank to lend to an investor for such a purpose. As long as such sentiments are widely shared a financial bubble can be self-sustaining for an extended period, apparently decoupled from the so-called 'real economy'.⁷¹

Eventually, alas, no bigger fool comes along, and the 'decoupling' proves illusory.

69 In the case of derivatives, capital gains can be won from speculative bets on price falls.

70 The simplistic belief that a new set of technologies would lead to a 'new economy' legitimated the dot.com bubble of the late 1990s, and the equally delusional belief that housing prices could only go up provided justification for the housing bubble that followed.

71 Toporowski 2000, p. 54.

Repayment of loans granted by some financial agents in a given period depends upon other financial agents rolling over and expanding other loans in the succeeding periods. The longer the upswing is kept alive solely by ever-expanding credit, the more likely it becomes that a critical mass of lenders will begin to question whether credit will continue to expand at the required rate in the future. At some indeterminate point, often due to an event trivial in itself, the house of cards collapses, and the upswing abruptly concludes. Loans cease to be automatically rolled over and expanded; debts begin to be called in. A sharp rise in demand from borrowers, needing cash to meet pressing debt obligations, pushes interest rates sharply higher, making it yet more difficult for others to roll their debts over. A panicked rush to hard cash to meet payments as they come due forces desperate selloffs of financial assets, leading to sharp declines in their prices. The asset side of the balance sheets of those holding those assets erodes, condemning many to insolvency. Those that survive have little interest in extending credit until their balance sheets have been restored to health. A generalised credit crunch tends to set off a major economic downswing. Those who benefitted least from the bubble necessarily tend to suffer the most from its bursting.

Recurrent financial crises, no less than exploitative labour relations and a systematic tendency to overaccumulation crises, are intrinsic to a social world dominated by capital's valorisation imperative. They too limit and distort human flourishing. They too provide a powerful reason to reject the standard view of capitalist market societies. They too justify the struggle for an alternative social world.

The case for seeking an alternative does not end here.

3.4 *The Systematic Tendency to Uneven Development*

Units of capital need a steady stream of commercialisable innovations to be successful. Generating that stream requires not only corporate labs devoted to product development. It also requires extensive investment in basic scientific research and long-term research and development, an education system capable of producing adequate numbers of knowledge workers, financing to support new high-tech companies before they are profitable, a legal system to resolve disputes about intellectual property rights, and so on. Needless to say, all of this is quite costly.

This creates a serious 'chicken and egg' ('Catch 22') problem in the capitalist world market: it takes wealth to generate innovations that are the basis for success in markets, but it takes success in markets to obtain the wealth required to establish an effective national innovation system. Wealthy regions clearly are in the best position to forge a virtuous circle of investment, where

the wealth to establish, maintain, and expand a national innovation system generates competitive advantages that lead to successes in the world market, while those successes enable the national economy to devote resources to developing the next generation of innovations. Poorer regions, in contrast, tend to find themselves in a vicious circle. Unable to fund the development of innovations granting competitive advantages today, their firms cannot enjoy the market success that would provide wealth able to fund the development of innovations for tomorrow.

Marx concluded that technological change in capitalism tends to systematically reproduce severe global inequality.⁷² Interestingly, a leading mainstream theorist of economic development agrees with this thesis, still overlooked by most philosophers of global justice:

(I)nvestment in innovation widens the gap between rich and poor countries. The output gains of the industrial countries exceed the output gains of the less-developed countries. We therefore conclude that *investment in innovation in the industrial countries leads to divergence of income between the North and the South*.⁷³

Regions in Europe and North America possessed sufficient wealth from agrarian capitalism, merchant capitalism, and production in slave plantations to establish the first extensive national innovation systems in the nineteenth century. In the mid-twentieth century a handful of countries from East Asia and Israel joined the group, thanks in good part to immense foreign aid and technology transfer provided by the United States for geopolitical reasons.⁷⁴ In the early twenty-first century China implemented a long-term strategy to catch up to the scientific-technological frontier in crucial sectors, utilising its cheap, skilled, and disciplined workforce, extensive subsidies, and the projected size of its domestic market as leverage to obtain extensive foreign investments and technology transfers. That is about it.

The most salient fact about technological change in global capitalism is not that some countries have approached the scientific-technological frontier in some sectors, but rather how few regions have been able to accomplish this over the last two and a half centuries. The vast majority of the world remains trapped in the vicious circle.⁷⁵ In the capitalist global system innovation is a weapon

72 Marx and Engels 1976b, p. 488.

73 Helpman 2004, p. 85; emphasis added.

74 See Westra 2012, pp. 59–60, and the discussion in Chapter 2.

75 A second ‘salient fact’ about national innovation systems in contemporary capitalism will be explored at length in the next chapter.

enabling states and firms from wealthy regions to reproduce and exacerbate their advantages over time.⁷⁶ By the time disadvantaged regions have caught up to one technological revolution, regions with effective national innovation systems have gone on to the next one.⁷⁷ The game is rigged.⁷⁸

The recurrent systematic tendency to poverty and severe inequality in the world market must be added to the list of ways human flourishing is limited and distorted by the flourishing of capital. It too provides a powerful reason to struggle for an alternative social world.

3.5 *Capitalism and the Environment*

All living entities – including all human societies – extract resources from their environment and emit wastes back into it. What sets capitalist societies apart is the ceaseless and relentless competitive pressures forcing capitalist producers to make as much profit as possible, as fast as possible. This generally requires using technologies to produce and sell as many commodities as possible, as fast as possible. And that in turn necessarily tends to deplete resources at a faster rate than they can be replenished by the relevant ecosystems, and to generate

76 The history of countries borrowing for development is by and large the history of countries falling into the ‘debt trap’, having to continually borrow to pay interest payments on previous borrowings. Loans only spur development, if the rate of return on investments made as a result of the loans significantly exceeds the rate of loan repayments. Local corruption of elites, nepotism, vanity projects, (mis) allocations of funds to sectors where there are limited opportunities to grow in the world market, and purchases of soon to be obsolete technologies, all work against that result. And even if all those problems were somehow avoided, an immense one would remain, given that borrowing for development will be successful on its own terms if and only if the returns from any increased flow of exports significantly exceed the costs of the borrowings. If a number of poor regions are following this strategy simultaneously in the same markets, the result will tend to be a greater supply relative to demand in those markets, lowering prices, and making it increasingly unlikely returns will be sufficient to cover the costs of servicing their debt. If they direct investment elsewhere, they are likely to find themselves entering markets where capitals associated with effective national innovation systems have immense competitive advantages. In either case it is unlikely returns will be sufficient to cover the costs of servicing their debt. Toussaint documents how the ‘third world’ transferred funds to wealthy creditors in the ‘first world’ equivalent to almost 50 Marshall Plans (Toussaint 1999, pp. 123, 151; see Westra 2012, p. 100). Decades after Toussaint’s book the situation remains (Wolf 2023b).

77 Perez 2002, Chapter 6.

78 Competitive market advantages from innovation are, of course, not the only mechanism generating uneven development. The tendency to geographical disparities has accompanied human civilisation since the earliest city states were able to grow in wealth, military power, and political rule at the cost of others. Imperialist and neo-imperialist capitalist regimes have made use these advantages too, a vast topic outside the scope of this work.

wastes at a faster rate than they can be processed.⁷⁹ As long as capital's valorisation imperative – 'M must become M'' – governs human life, it would be quite mistaken to hope for a 'technological fix' to environmental difficulties.⁸⁰

Many societies in human history have seriously harmed the ecosystems they depended on. But in the past the harm tended to be limited to specific regions. Only modern capitalism has inflicted immense harm on a truly planetary scale. Of the 31 crucial variables making up 'planetary vital signs', 18 are at new, all-time record lows or highs. These changes 'largely reflect the consequences of unrelenting business as usual'.⁸¹ 'Anthropocene' has become widely accepted as the proper term for the present period of the earth's history, when human actions have so significantly affected the state of the planet as a whole. But 'Capitalocene' is a far more accurate term. It is not humanity in general that has caused planetary states to approach or already begin to exceed the boundary conditions required for the 'viability of contemporary human societies'.⁸² It is the 'Grow or die!' imperative imposed by the property and production relations of modern capitalism.

It should go without saying that this indifference to the future prospects of our (and other) species' flourishing is yet another compelling piece of evidence that human flourishing is subordinated to the flourishing of capital in modern capitalism, perhaps the most compelling of all. It is yet another powerful argument for struggling to create an alternative social world.

79 '[A]ll progress in capitalistic agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil; all progress in increasing the fertility of the soil for a given time is a progress towards ruining the more long-lasting sources of that fertility ... Capitalist production, therefore, only develops the techniques and the degree of combination of the social process of production by simultaneously undermining the original sources of all wealth – the soil and the worker' (Marx 1976, p. 638).

80 Technical change in capitalism generally introduces more 'sustainable' technologies over time, that is, technologies that use fewer resources and emit fewer wastes per unit of output. In the course of the industrial revolution, for example, each generation of the steam engines burned less coal per unit of output. Nonetheless, the economist Jevons noted, the aggregate amount burned increased greatly. The explanation of the 'Jevons Paradox' is straightforward: the increase of aggregate output overwhelmed the decrease of coal used per unit of output. See Foster and Clark 2020, pp. 245–6. On the dream of a technological fix as a social pathology of capitalism, see Malm 2023.

81 Ripple et al. 2021, p. 896.

82 Rockström et al. 2009, p. 473. In Rockström et al. 2023 the authors summarise their most recent findings as follows: 'Seven of eight globally quantified safe and just ESBs [Earth System Boundaries] and at least two regional safe and just ESBs in over half of global land area are already exceeded'.

3.6 *The Capitalist State*

Few defenders of contemporary capitalism – and no liberal democratic republican – believe it is not flawed in important respects. Their hope is that the flaws can be overcome through piecemeal reforms. State legislation and regulations have addressed some problems in some places to some extent. Further reforms are no doubt possible in the future. Given the unfortunate record of failed attempts to institute an acceptable alternative to capitalism, why isn't it better to struggle for piecemeal improvements to the system we have?

Capitalism is radically open-ended. The form it takes today is not what it was yesterday, and not what it could be tomorrow. No Marxist would deny that laws eradicating slavery, extending voting rights, limiting the length of the workday, providing unemployment insurance and social security, and so on, count as meaningful reforms. Few would refrain from supporting political policies today promising to improve the quality of life of the oppressed and disadvantaged. But trying to reform the system is playing a whack-a-mole game that cannot be won.

For one thing, capitalist states, emphatically including those that are formally democratic constitutional republics, have an oligarchical core. It is all too easy for concentrated economic power to be translated into disproportionate political power. The mechanisms are familiar. They include campaign contributions, the revolving door offering lucrative employment to favoured state officials after leaving their posts, the power of privately owned media to make and break political careers, educational institutions socialising future state officials into the dominant ideology, private think-tanks relieving state officials from the burden of having to determine themselves what policies their donors want, the need for state deficits to be financed through the purchase of government bonds on a massive scale, and political elites' self-interest in appropriating a cut of surplus value for their political projects.

If all that is insufficient, the use of investment funds as a political weapon remains. If a state were to institute policies threatening to significantly shift the balance of power between labour and capital in the former's favour, a capital strike would be inaugurated, plunging the economy into chaos. Faced with a refusal to invest, state officials would then face a stark choice: either rescind the reforms unacceptable to the representatives of capital or inaugurate a break from the property relations granting private interests a *de facto* veto over public policy. Both options represent the failure of the reformist project. Less squeamish factions of capital, finally, have the option of mobilising death squads if they think circumstances warrant more extreme measures.

On a yet deeper level, the capitalist state cannot dissolve the property and production relationships defining capitalism and remain a capitalist state.

Insofar as capital's reign over the social world emerges from (is an expression of) the social relations of dissociated sociality, it cannot be reformed away while those social relations persist. No mere reform can prevent the commodification, monetarisation, and valorisation imperatives of capital from dominating social life, subordinating human ends to the good of capital. No mere reform can overcome the structural coercion, domination, and exploitation inherent in the capital/wage labour relationship. No mere reform can remove the tendencies to recurrent overaccumulation and financial crises, environmental crises, or poverty and severe inequality. And no mere reform can institute a substantial equality of political citizenship between those who own or control money capital and those cut off from the material preconditions of human life by their lack of monetary resources. To think otherwise is to indulge in fantasy.⁸³

State policies are open-ended and can affect the course of capitalist development no less than they are affected by economic developments. Nonetheless, the capitalist state too is subjected to capital's imperatives. At best, state policies involve promises that cannot be kept. At worst, they reinforce the social pathologies considered in this chapter.

4 Conclusion

Section 1 of this chapter considered the main line of defence of capitalist market societies, the so-called 'standard view'. It might surprise some defenders of this view to learn that Karl Marx affirmed freedom, equality, and human well-being as core normative values.⁸⁴ In an early writing he called for a society where 'the free development of each is the condition for the free development of all'.⁸⁵ Decades later Marx explicitly reaffirmed his commitment to a society where 'the full and free development of every individual forms the ruling principle'.⁸⁶ Marx also explicitly acknowledged capitalism's unprecedented dynamism:

83 'The common ground of determination of all vital practices within the framework of the capital system, from the direct economic reproductive to the most mediated state regulatory functions, is the expansion-oriented structural imperative of the systems to which the diverse social agencies under the rule of capital must conform' (Mészáros 1995, p. 60).

84 Smith 2017a, Chapter 3; Lebowitz 2010; Shoikhedbrod 2019.

85 Marx and Engels 1976b, p. 506.

86 Marx 1976, p. 739. Similarly, in the *Grundrisse* Marx anticipated 'a society of free individ-

The bourgeoisie, during its rule of scarce one hundred years, has created more massive and more colossal productive forces than have all preceding generations together. Subjection of Nature's forces to man, machinery, application of chemistry to industry and agriculture, steam-navigation, railways, electric telegraphs, clearing of whole continents for cultivation, canalisation of rivers, whole populations conjured out of the ground – what earlier century had even a presentiment that such productive forces slumbered in the lap of social labour?⁸⁷

And he recognised the capacity of state reforms to address market failures in certain circumstances, defending, for example, laws limiting the length of the workday and extending suffrage rights.

Nonetheless, for Marx it is simply not the case that capitalism could ever adequately further 'the full and free development of every individual' adequately. The most fundamental reason for this was presented in Section 2: the ultimate purpose of this system is not the freedom and well-being of social individuals. Its ultimate purpose is the endless accumulation of capital as an end in itself. The dominant imperative governing social life is to foster capital's good, valorisation, rather than what is good for human beings. Implications of this perverse dynamic were explored in Section 3.

As long as capital remains invisible it is easy to believe that all problems can be overcome in constitutional republics if only the political will to do so were present. Once capital in the primary sense of a macro-monetary totality has come into view, however, that belief is impossible to maintain. A theoretical and practical imperative to search for a superior alternative follows immediately.

In my view, this conclusion is overwhelmingly compelling. As Chapter 3 shows, capitalism has mutated in recent decades in ways that make the case for the socialist project even more powerful.

uality, based on the universal development of individuals and on their subordination of their communal, social productivity as their social wealth' and where the 'development of all human powers as such [is] the end in itself' (Marx 1973, pp. 158, 708). See Lebowitz 2021, Chapter 5.

87 Marx and Engels 1976b, p. 489.

The Present Moment of World History

The concept of capital presented in the previous chapter is contestable and very contested, as is the call to institute a socialist alternative to capitalist market societies. Many progressive activists and theorists refuse to draw the conclusion that capitalism's flaws are irredeemable. Proponents of the so-called 'Green New Deal', for example, believe that with the right sort of public policies investment in green technologies and products can bring about a new 'golden age' of capitalist development with high levels of investment, good paying new jobs, and rapid rates of sustainable economic growth lifting the quality of life for all.¹ Rather than continuing Chapter 2's defence of a Marxian critique of capital, in this chapter I shall attempt to justify the socialist project by appealing to features of contemporary capitalism that are not in serious dispute.

The first section argues that contemporary capitalism has reached world historical limits. This does not mean that its final breakdown has commenced. But the sort of capitalist development its defenders regard as 'healthy' is no longer possible. Advocates of the standard view have considered technological dynamism one of its greatest strengths. This dynamism has now become – and will continue to be – an insuperable weakness. No technological change and no set of public policies will bring about a new 'golden age' of capitalism comparable to those that a very few privileged regions have enjoyed in the past. The second section of the chapter places this transformation within a historical narrative of the capitalist world market from the conclusion of World War II through the 1970s. The final section continues the narrative to the present, arguing that social pathologies of our day are deeply rooted in features of contemporary capitalism that cannot be eradicated without eradicating capitalism itself.

1 Technological Change and Valorisation in Contemporary Capitalism

The first seven statements examined in this section are not in serious dispute. Some are universally accepted empirical facts, some are tautologies, some com-

1 Versions of this position are defended in Duncan 2022, Hockett 2020, and Kelton 2020. Compelling responses to this view are given in Richard Smith 2016 and Foster and Clark 2020.

bine the two. The eighth and concluding assertion will undoubtedly prove controversial. It is, however, a direct implication of the others. If they cannot be seriously disputed, neither can it.

1. Capitalism possesses an immanent drive to innovative dynamism.

No defender of capitalism questions this assertion; all make it central to their defence. The previous chapter noted how market competition systematically tends to reward producers whose products are preferred over competitors' products by those with purchasing power. This provides producers with a strong incentive to seek *product innovations*. Similarly, market competition generally rewards units of capital that have successfully introduced *process innovations* enabling their products to be produced and distributed at lower unit cost than their competitors. These firms can then seize market share by lowering prices while maintaining or even increasing their profit margins. In both cases successful innovations tend to generate above average returns.

Innovation did not begin with modern capitalism. Nonetheless, I take it to be an indisputable fact that the rate of innovation in modern capitalist societies has been greater than in any earlier period of world history by orders of magnitude. As a result, the range of products that can be produced, and the scale of their production, have exceeded anything that came before. No advocate of capitalist market societies would dream of disputing that. Just the opposite; all advocates of capitalist market societies consider competition to make better products more efficiently to be at the very heart of the system they defend.²

2. Continued innovation requires advances in scientific-technological knowledge.

For the greatest (by far) part of human history the use of specific technologies was not associated with a scientific understanding of how the technologies worked. In the absence of formal knowledge explaining why one product or process overcame technical problems besetting others, advances typically

2 There are, of course, other less 'healthy' ways a unit of capital can obtain a competitive advantage. Political connections and monopoly control over necessary raw materials are two examples. But if we want to consider the strongest case that can be made in favour of capitalist market societies, market success from producing better products and being able to produce them more efficiently must be a main focus.

occurred through pure accident or trial and error.³ Practitioners noticed that some random action had an interesting result. Or they experienced spontaneous creative leaps of imagination leading them to tweak a process or modify an artifact just to see what would happen.

Today too innovations often emerge in the course of 'learning by doing' in the absence of formal knowledge. But when units of production face relentless competitive pressures to innovate, the search for innovations will invariably become more systematic.

In Baumol's striking phrase, 'innovate or die!' is a governing imperative of modern capitalism.⁴ In no previous period has there been comparably intense pressure to innovate. Unforeseen accident, and trial and error are too haphazard to be counted on in the face of relentless competitive pressures. Advances in scientific-technological knowledge promise to deliver a reliable steady stream of potential innovations. It should come as no surprise, then, that the history of science and the history of technology have become increasingly intertwined, to the point where we can speak of a synthesis of the two ('technoscience') at the heart of capitalist development today.⁵ Who today would dispute that improvements of product lines and production and distribution processes have become increasingly dependent on scientific-technological knowledge?

The next assertion is similarly uncontroversial.

3. Over time, the systematic development of scientific-technological requires increasingly complex and large-scale networks of organisations and activities.

Five activities can be distinguished in the innovation processes of contemporary capitalism: 1) fundamental research; 2) development of the concept of an invention, culminating in a functional prototype; 3) early development, that is, experiments in scaling up production of the prototype and investigating potential market demand; 4) product development, where the product design is revised and the production process restructured in response to issues arising in early development; and finally 5) production and marketing.⁶ These are not

3 The history of the steam engine is a paradigmatic example. Many generations of improvements were made before the science of hydrodynamics provided a theoretical framework for explaining the workings of these engines.

4 Baumol 2003.

5 For the US version of this story see Noble 1977.

6 Auerswald and Branscomb 2003.

stages in a linear progression. They are thoroughly intertwined, with each having complex feedback relationships with all the others.

In early stages of capitalist development, relatively wealthy persons with some general knowledge, practical experience, and a few assistants could undertake innovation in their workshops. Over time, however, this became much more difficult. As R&D grew in importance, specialisations between and within the different parts of the innovation process were developed. New institutional forms arose, including research institutes with or without university affiliation, corporate R&D labs, professional associations, professional conferences, and the like. An increasing percentage of the population now spend their work lives in one or the other of these settings. An education system is required to produce appropriate numbers of knowledge workers with the general background knowledge needed for one or another sort of innovative activity, from scientists operating at the frontier of scientific-technological knowledge to line workers producing and using advanced machinery. Specialised training is also required. So are new forms of education and training beyond that of scientific-technical knowledge workers in the narrow sense. Business schools, for example, have to produce the managerial competences required to oversee product development. Law schools must produce the vast armies of lawyers needed for intellectual property rights to be assigned, enforced, and traded, among other tasks. Specialised financial vehicles (such as venture capital funds supporting high tech start-ups, banks loans and bond offerings to fund the production or marketing of innovative products, and so on) need to be established. They too require a specialised workforce.

This list of the components of national innovation systems could be easily extended.⁷ But even the abbreviated list above makes the complexity and scale of the innovation process in contemporary capitalism indisputable.

4. Funding the different moments of the innovation process on the scale required for a continuous stream of innovations to be commercialised is extremely expensive.

As the complexity and the scale of organisations and activities contributing to the innovation process increases, the costs of establishing and maintaining those organisations and activities over time tends to increase, both in absolute terms and as a percentage of GDP. Global R&D expenditures, for example, have

⁷ See Nelson 1993.

tripled from \$722 billion in 2000 to \$2.153 trillion in 2017 (measured in current purchasing power parity dollars).⁸ Familiar references to ‘the knowledge economy’, ‘the information age’, and other clichés of our day reflect this feature of contemporary capitalism.

We come next to a very underappreciated – but undeniable – distinguishing feature of contemporary capitalism.

5. There are now more regions in contemporary capitalism that have been able to fund reasonably effective national innovation systems than in any previous period of world history.

I argued in the previous chapter that there is a systematic tendency for severe global inequality (‘uneven development’) in the capitalist world market, rooted in the competitive advantages a relatively few wealthy regions enjoy from innovations. As a result, a global hierarchy is formed warranting the label of a neo-colonial or neo-imperialist system. The number of countries with effective national innovation systems operating at or close to the scientific-technological frontier in key sectors remains extremely low in absolute terms today. Just eight countries out of the 193 that presently exist (the United States, China, Japan, Germany, South Korea, France, India, and the United Kingdom) jointly account for about 75% of global R&D expenditures.⁹ As of 2020, only 17 countries devote two percent or more of their GDP to research and development, only nine more than three percent.¹⁰

Nonetheless, it is simultaneously also the case that there are relatively more effective national innovation systems in place today than ever before in human history. The two points do not contradict each other. The world is complex.

The days when the US had the only effective national innovation system in the world market are long over. R&D spending continues to shift from the United States and Europe to East-Southeast and South Asia. ‘The combined R&D performance across these Asian regions rose from 25% to 39% of the global total from 2000 to 2019, while the US and EU-27 shares declined from 37% to 28% and from 22% to 18%, respectively’.¹¹

The fifth assertion, then, also cannot be reasonably disputed.

The next may be less recognised, but it is even less open to question.

8 National Science Board 2022.

9 National Science Board 2022.

10 OECD 2022, p. 2.

11 National Science Board 2022.

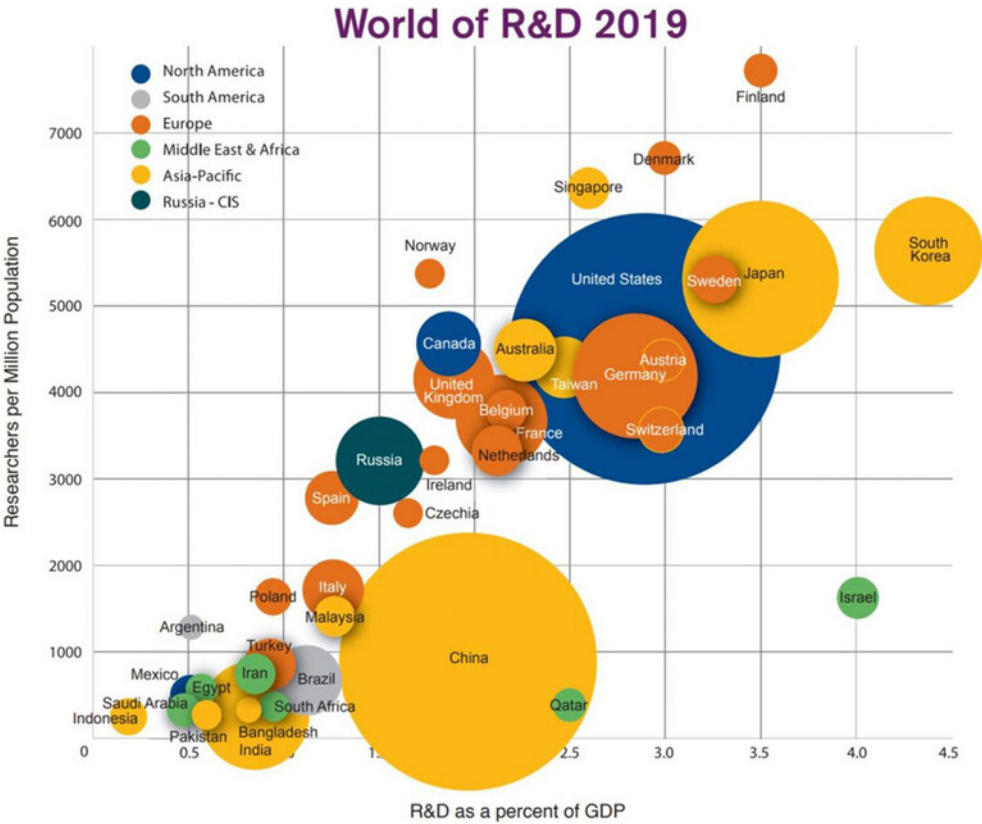


FIGURE 4 Global R&D spending

6. The proliferation of reasonably effective national innovation systems necessarily tends to compress the time it takes for innovations to diffuse and/or for adequate substitutes to be found.

This statement is a tautology. If a national innovation system cannot repeatedly and relatively quickly reverse engineer an innovation introduced elsewhere and/or come up with an adequate substitute, it is not 'reasonably effective' in the relevant sense of term.

'Quickly' does not imply 'instantaneously' or 'costlessly'. It does not imply that all advances are eventually duplicated. In particular cases, those directing other innovation systems may choose to not commit the resources required for reverse engineering or for developing a substitute. Some technological advances may involve theoretical or practical challenges making them far more difficult to duplicate than others. Political and ideological factors may prevent governments from mobilising their national innovation systems effect-

ively. Despite all the necessary qualifications, however, in general a scientific-technological advance made in one part of the globe tends to be able to be duplicated elsewhere more rapidly than ever before in human history, due to the spread of national innovation systems.

7. The proliferation of reasonably effective national innovation systems in the contemporary capitalist world market tends to compress the time an innovating unit of capital can appropriate surplus profits from an innovation.

This too is a tautological assertion. When surplus (above average) profits come from a competitive advantage in innovation, the erosion of this competitive advantage erodes the surplus profits that come from it. The empirical relevance of this tautology today cannot be denied, given the state of affairs described in #5 above (which, again, no one seriously disputes).

From these seven premises a conclusion follows.

8. The proliferation of reasonably effective national innovation systems tends to lead to a lower rate of investment in industrial and commercial capitals and a corresponding lower rate of economic growth.

This final assertion will seem very implausible to all those accepting the common assumption that in capitalism there is an essential connection between technological dynamism and economic dynamism. But it follows directly from the earlier seven points, none of which can be plausibly rejected.

This conclusion admittedly seems counter-intuitive. If the 'healthiest' form of capitalist competition is competition to produce products consumers want efficiently, and if national innovation systems provide a fairly continuous stream of commercialisable innovations resulting in better products and more efficient ways of producing them, how could the relative proliferation of national innovation systems not be a positive development for capitalism?¹² How could a more robust system of innovation and diffusion not be more 'healthy' for capitalism?

This line of thought ignores an absolutely crucial but too rarely noted aspect of technological change in capitalism: *In capitalist market societies it is not innovation in itself that matters to units of capital, but the time competitive*

12 In posing this question I am assuming for the sake of the argument the standard model of capitalism. Outside of this context the categories of 'improved products' and 'productivity' used by defenders of this model must be critically examined.

advantages that can be won from innovations. The fact that the proliferation of national innovation systems generates a stream of innovations is important in use-value terms. But in a for-profit system the production of use-values is a secondary concern for investors. When decisions regarding investment are being made, it is not the usefulness of the innovation that would be commercialised that is the key consideration, but rather the level of profits it is reasonable to expect as a return.

When a successful (by capital's measure of profits) innovation is first introduced, innovating firms win a greater market share and higher profits, justifying increased investment and more hiring. This leads other units of capital (their suppliers and distributors, those producing consumer goods for their investors and workers and their suppliers and distributors, and so on) to invest and hire more, stimulating economic growth. Eventually, however, other firms in the innovating sector figure out how to duplicate the innovation or leapfrog beyond it. The initially innovating companies will then tend to lose market share, suffer declining profits and have to lay workers off, unless they are able to introduce a new innovation that once again forces competitors to play catch-up for a period of time.

If the process of innovation and catching up is sufficiently spread out in time, technological dynamism and economic dynamism are indeed strongly correlated. The more this time is compressed, the weaker the correlation. From this perspective, contemporary capitalism is in an unprecedented situation: *while there are still only a relatively few effective national innovation systems in place in the world market, from the standpoint of economic dynamism there are too many.*

Today as soon as an innovation showing promise of being exceptionally profitable is developed in one region of the world, national innovation systems across the global tend to be rapidly mobilised, hoping to get a piece of the action. As a result, there is now a systematic tendency for the time high profits can be won from innovations to be significantly compressed in comparison to all earlier phases of capitalist development.¹³ As the prospect of high profits from innovations for extended periods of time declines, the dominant tendency is for rates of investment in industrial and commercial capital to decline as well. Capitalist investors, after all, are generally motivated by monetary returns, and not by innovation for its own sake.

13 There are counter-tendencies that enable high profits to be appropriated despite the relative proliferation of effective national innovation systems, considered in Section 3 below. They do not remove the tendency being discussed here.

Consciousness has lagged behind this qualitatively new state of affairs. Most defenders of capitalist market societies still assume that if we could just discover the right breakthrough technologies and get the right public policies in place, a new 'golden age' of dynamic economic growth and shared prosperity could be won. Many progressive critics of the present social order share this view. But the more or less universally accepted seven statements introduced above imply the not widely accepted conclusion that *there will be no more 'golden ages' of capitalist development*.

In the previous history of capitalism one or at most two nations have been at the centre of technological revolutions for an extended period of time. They have enjoyed the resulting competitive advantages in the world market giving them the material basis for 'golden ages' of capitalist development in the privileged region(s).¹⁴ That state of affairs is no longer possible. Capitalism has now reached historical limits as a dynamic system, not because there is too little innovation, but because there is too much. Short of an unimaginably cataclysmic destruction of a high percentage of the effective national innovation systems operating today, there is a strong tendency to 'secular stagnation' in the capitalist world market. This is not because the rate of innovation has slowed, or the opportunities to commercialise innovations have eroded.¹⁵ Nor is it because of a 'savings glut' in countries with trade surpluses.¹⁶ The fundamental factor is the erosion of opportunities to appropriate surplus profits from commercialised innovations for extended periods of time, due to a dominant tendency for overaccumulation crises to arise and persist in contemporary capitalism. If the form of capital accumulation its defenders consider 'healthy' – competition on the basis of product and process innovation – is undermined in this way, we have a compelling reason to consider whether there might be a superior way of organising social life, a reason resting on considerations that are not seriously contested.

To assert that there is a tendency for overaccumulation difficulties to arise is to restate a familiar Marxian thesis. To assert that there is a tendency for them

14 Broadly compatible accounts of these periods are found in Mandel 1999, Arrighi 1994, and Perez 2002. The work of 'social structures of accumulation' and 'regulation school' theorists on 'golden ages' in capitalist development is also of interest in this context.

15 Robert Gordon's thesis that the 'rise and fall' of the US is due to the paucity of important innovations is mistaken in use-value terms (the internet and machine learning aren't that important?) and misses the centrality of the value dimension in capitalism. See Gordon 2016.

16 This view has been vehemently defended by Bernanke, the former head of the Federal Reserve (Bernanke 2005). A variant of the argument is found in Klein and Pettis 2020.

to 'persist' is to suggest that capitalism in our day does not function as it did in of Marx's, when overaccumulation difficulties were recurrent rather than persistent.

We can deepen the understanding of our present moment by incorporating the above considerations in a brief historical narrative of capitalist development in the decades immediately following World War II, concentrating on the options available to capital in response to the persisting threat of overaccumulation.

2 From a 'Golden Age' to a Global Slump

After World War II Japan and much of Europe were reduced to rubble. Other regions of the global economy affected by the war were not much better off. And yet in the decades after World War II, Germany, Japan, South Korea, and Taiwan grew at historically unprecedented rates. How were those regions able to accomplish this feat, given the immense difficulties that needed to be overcome, specifically the vicious circle afflicting poor regions described earlier?

Once asked, the answer is not hard to find. The nations in question were on the front lines of Cold War. The dominant capitalist power, the United States, had a strong geopolitical interest in the prosperity and stability of allies on the front lines, so to speak, of geopolitical competition against the USSR and 'Red' China.

None of these regions would have joined the front ranks of industrialised nations had they devoted their efforts to the sectors where they had 'comparative advantages' in the late 1940s (that is, sectors where the opportunity costs of producing were lower than in wealthier regions). US political elites proved by their actions that they fully understood that policies based on clichés of 'comparative advantage' would never bring prosperity and stability, but instead keep key allies trapped in the sort of vicious circle described in the previous chapter. Economic growth demanded that the free-market manual be ripped up. The US acquiesced to high tariff barriers imposed on US goods (apart from those needed as inputs for domestic producers), while tariffs barriers in the US were lowered for imports from key allied countries, allowing them to export whatever the US domestic market could absorb. No political pressure was put on these states to allow capitals from the US to take over promising firms or banks, or to dismantle the capital controls that prevented Asian investors from investing in the US rather than their domestic economies. Tremendous amounts of money were funnelled into these nations through military expenditures, regardless of human rights violations by allied authoritarian

regimes. Key technologies were simply given away.¹⁷ These policies provided the necessary preconditions for these regions to overcome the devastation of the world war and escape the vicious circle.

US capitals had tremendous competitive advantages following the war – unharmed factories operating at full capacity, a head-start of decades in commercialising the technologies and forms of social organisation of Fordism, pent up demand and savings after wartime austerity, generous state contracts for the military industrial sector, the role of the dollar as the anchor of the dollar-gold system established at Bretton Woods, and so on. Together with the rebuilding of Europe and Japan and the rapid growth of other allies, the decades following WW II were a ‘golden age’, at least for many in the core regions of the capitalist world economy. High profits encouraged high rates of investment, high levels of employment, and expanded business for suppliers – who then expanded *their* investments and employment. As job growth increased, real wages did as well (at least for white, male, unionised workers), along with credit extension to working households. This increased effective demand, justifying yet higher levels of investment, setting off another round of rapid growth.

Eventually, however, difficulties arose. In use-value terms, Japanese and Western European firms (from West Germany in particular) mastered the tech-

17 ‘Japan rapidly became the US frontline base for its operation in Korea ... with US spending on supplies from Japan totalling \$3 billion. And this was on top of approximately \$1.7 billion in aid the US channelled to Japan during the occupation years ending in 1952 ... As was the case with the Marshall Plan for West Germany and the nascent EU, Japan too overcame the abiding development “catch-22” of having to export in order to pay for imports but being unable to produce for export without first importing material and machinery. ... Tens of thousands of patents for multifarious technologies were freely transferred to Japan. These factored into both the rise of key industries such as automobiles and machine tools as well as electronics and synthetic fibers, and resurrected industries like steel and shipbuilding/repair’ (Westra 2012, p. 54). ‘Considerable economic largesse along with select technology transfer flowed to key Asian anticommunist allies ... [B]etween 1953 and 1967 Taiwan received \$1.3 billion in economic assistance largely as grants which, added to military assistance, amounted to \$365 per capita at a point when in 1960 Taiwan’s annual per capita income was a mere \$110. From 1946 to 1976 South Korea received \$12.6 billion in economic and military assistance from the US which, when topped up by funds from international institutions and Japan, amounted to approximately \$600 per capita, equal to the total aid received by all of Africa or half that received by all Latin America during the same period. Between 1953 and 1962 such flows financed close to 70 percent of South Korean imports and constituted 75 percent of fixed capital formation. This fact surely vitiates the mainstream economic mantra of simple EGO [Export Oriented Growth] as, absent the anticommunist partnerships the region entered into with the US, it is not clear from where in a free trading ‘free world’ the capital underpinning globally competitive exports would have been generated’ (Westra 2012, pp. 59–60).

nologies of mass production. In many sectors they became more efficient producers of higher quality products than their US competitors. US capitals, however, were not willing to shut down production and cede market share to overseas competitors to the degree required to maintain the average rate of profit in the affected sectors. This was rational from their individual standpoint.¹⁸ The result, however, was irrational from the standpoint of the capitalist economy as a whole. The total amount of capital invested in crucial sectors could no longer be valorised at the same rate.

The post-war 'golden age', characterised by high levels of profit, investment, economic growth, and rising real wages (for some, at least), came to an end in the 1970s. There were many factors leading to the global slowdown; concrete historical events are always overdetermined by a multiplicity of causal factors. But one major factor was surely the excess capacity in leading sectors of the global economy. The global slowdown of the 1970s was an *overaccumulation crisis*.¹⁹

In previous periods of capitalism an extended period of overaccumulation difficulties in the world market set off what Marx termed an 'overexertion phase' of a socio-economic cycle.²⁰ In this phase increasingly desperate attempts would be made to keep the upswing going, requiring higher levels of credit to be injected into the economy.²¹ The initial response to the first signs of the post-War boom slowing down fit this pattern. As Marx anticipated, the creation of credit money did not solve the underlying problem. It instead transformed the form in which it was manifested to a *stagflation* combining a continuing slowdown with an outbreak of inflation.

18 As noted in Chapter 1, when more efficient producers enter a sector, it can be a rational response for established firms to remain operating. They have already made fixed capital investments; if they continue operating, they may hope to obtain at least the average rate of profit on their variable costs (raw materials, wages, etc.). Their workforce and managerial staff have sector-specific skills. There may be important relationships with suppliers, distributors, and local governments that would be difficult to reproduce were they to shift production to a different sector. And they may hope to make innovations in the future allowing them to leapfrog over their competitors. See Reuten 1991, Brenner 2006.

19 Brenner 2006, Copley 2022.

20 Marx 1981, p. 619.

21 'The maximum of credit is the same thing here as the fullest employment of industrial capital, i.e. the utmost taxing of its reproductive power irrespective of the limits of consumption. These limits to consumption are extended by the stretching of the reproduction process itself; on the one hand, this increases the consumption of revenues by workers and capitalists, while on the other it is itself identical with the stretching of productive consumption' (Marx 1981, pp. 613–14).

In Marx's account of systematic cycles of capital accumulation, after an upswing has given way to overaccumulation difficulties and the brief overexertion phase concludes, an extended recession or depression devaluing previous capital investment and even destroying much of the excess productive capacity. More or less on schedule a sharp recession occurred in the second half of the 1970s.

A global depression devaluing or destroying productive capacity on that scale would have been horrific even by capitalism's perverse standards, given the build-up of capacity in leading sectors of East Asia, Europe, and North America. The US would have been especially devastated, given the degree capitals from Germany and Japan had leapfrogged over their American competitors in important sectors. (We can add in passing that even if a severe global depression had occurred, it would only have resolved overaccumulation difficulties temporarily, given the relative proliferation of reasonably effective national innovation systems.)

A considerable devaluation and destruction of capital took place in the recessions of the late 1970s and early 1980s. The scale of the resulting damage to lives and communities should not be downplayed. But there was no "slaughter of capital values" on a scale sufficient to end [overcapacity and overproduction].²² The global slowdown of the 1970s/early 80s was relatively brief and did not mutate into a new Great Depression. Profits vigorously recovered, even if not quite to 'golden age' levels. The expansions in subsequent decades extended for unprecedented lengths in the US and other 'core' regions, interrupted only briefly by mild recessions. Why did overaccumulation difficulties not soon give way to a massive devaluation and destruction of excess productive capacity in a severe recession or depression, as Marx's account of capitalist cycles would lead one to expect? Why hasn't China's addition to the number of regions with effective national innovation systems – which tremendously strengthens the tendency to persisting overaccumulation difficulties – not had that consequence?²³

22 Desai 2013, pp. 24–5.

23 Weber 2021. The Chinese government used a seemingly limitless supply of relatively inexpensive, but highly trained and disciplined, labour force, along with the allure of a gigantic domestic market, to attract foreign direct investment, granting permission to invest in return for significant technology transfers. Together with export earnings and a historically high rate of (forced) savings, the formal and informal technology transfers enabled China to escape the vicious circle and develop a world class innovation system. This developmental path was based on quite exceptional historical circumstances. It certainly did not provide a developmental model that other nations could implement and expect similar success. China's advance has if anything made the task of catching up to the scientific-

We should take a moment to appreciate capital's resilience. A path forward for capital accumulation was forged, despite the continuing threat of excess productive capacity in the most dynamic sectors of the world market. This path combined several disparate responses by representatives of capital to the new situation, generally lumped together under the heading 'neoliberalism'.

3 Neoliberalism

The main thesis of this chapter is that capitalism has today reached historical limits that make commitment to the socialist project a theoretical and practical imperative. The technological dynamism that has spurred economic dynamism in the past tends to no longer do so; the time high profits can be appropriated from innovations now tends to be significantly compressed relative to all earlier periods of capitalist development.²⁴ The structure of the global economy generating this tendency was fully in place by the 1970s, and the underlying threat of overaccumulation difficulties has only been exacerbated the rapid rise of China as a scientific-technological competitor.

Nonetheless, the valorisation imperative has remained in force after the global slowdown of the 1970s, manifested in a (sometimes haphazard, sometime systematic, always desperate) search for counter-tendencies to counteract the tendency for profits to be eroded by the proliferation of national innovation systems. I shall use the term 'neoliberalism' to refer to the set of strategies pursued by leading representatives of capital in response to the new historical situation.²⁵ Together they have offered a path forward for capital accumulation. But this has come at the cost of a number of serious social pathologies.

These pathologies – severe levels of inequality, immense concentrations of corporate power, a financial system plagued by the 'moral hazard' of benefiting from speculative excesses whose risks are displaced elsewhere, and so on –

technological frontier much more difficult for other countries now that China has established a strong beachhead in so many high 'value-added' pursuits. See Rodrik 2012.

24 It would be difficult to argue that any limits are more significant than those posed by changes to the environment. The future prospects of human flourishing will be beyond bleak if capital's insane 'Grow or die!' imperative is not dismantled sooner rather than later (Malm 2023). In the present chapter, however, the focus is on a different limit point reached in contemporary capitalism, one based on the very dynamic that capitalism's leading advocates have always insisted was among its greatest strengths.

25 'Neoliberalism' is not a single system of strategies and policies implemented throughout the world. The form it has taken has depended upon a host of contingencies, including previous paths of development in particular places, the present balance of social forces in

are widely recognised today, complained about in the business press almost as much as in progressive publications. The more humane of capitalism's defenders regard these social pathologies as the fruits of mistaken policies that could be dismantled whenever the political will to do is sufficiently strong. In the view defended here, in contrast, the unprecedented persisting threat of overaccumulation in contemporary capitalism makes the pathologies examined below (and many others) all but unavoidable as long as the property and production relations of capitalism are not overcome.

3.1 *The War on Labour*

By the 1970s the long post-war boom had resulted in something approaching full employment in the major regions of the global economy. Unions were relatively strong in core regions, many with a growing cohort of militant activists. The balance of power in labour markets and labour processes was perhaps as favourable to labour as any other point in capitalist history. When the long boom ended, the question was, as always, who would bear the costs. Capital's answer, as always, was 'Them, not us!'

The 'Volcker shock' engineered by the head of the Federal Reserve in 1979 lifted interest rates to stratospheric levels. This had the foreseeable (and foreseen) effect of weakening the social power of labour, creating levels of unemployment previously considered politically unacceptable. Other aggressive state policies against labour soon followed. Reagan's firing of striking airline controllers provided an unmistakable signal that a war on labour had commenced. If the organisation of an entrenched group of state workers performing an essential function could be attacked, no set of workers was safe. Labour relations boards were stacked with rabidly pro-business members, becoming weapons of capital rather than sites of negotiation and accommodation.²⁶ The United Kingdom under Thatcher saw an equally ferocious political attack on workers' capacity to defend their collective interests. Most capitalist states soon commenced their own versions of the war on labour.

Capital had a number of new weapons to take advantage of in this war, including:

those places, experimentation with different strategies and policies, the insights (or lack thereof) arising in the course of trial-and-error, the dominant ideological assumptions of various groups at various points of time, and so on. No attempt will be made to consider such contingencies here. (A good account of neoliberalism in the UK examining the role of such contingencies is found in Copley 2022.)

26 Davis 1986 and Moody 1997 are classic studies of the war on labour in the US.

* Advances in communications technologies and transportation technologies allowing production to be shifted more easily and at lower cost from regions where workers were organised and well-paid to regions where levels of organisation and pay were much lower. In the US, eastern and mid-western manufacturing regions suffered extensive deindustrialisation, while production facilities proliferated in the non-unionised Sunbelt.

* At more or less the precise moment when US capital was ruthlessly attempting to shift the balance of power in the capital/wage labour relationship, China opened up to foreign direct investment. This supposed workers' state willingly sacrificed generations of its workforce as part of its long-term strategy for catching up to leaders in the world market. An effectively unlimited supply of cheap, skilled, and disciplined labourers was put at the disposal of multinational capitalist firms, in return for direct investments and accompanying formal and informal transfers of technology. Other regions (Mexico, Eastern Europe, Southeast Asia) also provided workforces capable of operating advanced machinery systems at a fraction of labour costs in the US, Europe, and Japan.²⁷ Advances in containerised shipping made the option of producing in disadvantaged regions for export to wealthy regions feasible and immensely profitable for multinational firms. With the threat of capital flight to China or Mexico or Eastern Europe so palpable, it became increasingly difficult for workers in countries of the centre to refuse extended work hours, speed-ups, or wage cuts.

* No less than the machinery systems Marx examined in Volume I of *Capital*, contemporary technologies enabling automation, robotisation, and electronic monitoring of the workplace shifted the balance of power in labour markets and the labour process in capital's favour through technologically-induced unemployment and deskilling. Massive numbers of relatively well-paid blue-collar jobs in manufacturing were lost.

* The increasing use of part-time and temporary workers also shifted the balance of power in capital's favour. The more difficult it is for members of the workforce to unite as a collective force – the more each meets the concentrated power of capital as an isolated individual – the easier it is for representatives of capital to impose their terms. When new platform technologies enabled the rise of the so-called gig economy, the

27 Wages were 20% of US levels in Mexico, a mere 5% in China (McNally 2010, p. 53).

already stark contrast between ever-more concentrated corporate power and ever-more dispersed labour became yet starker.

* Increased stress at the workplace, and a generalised increase in stress from intensified economic insecurity, have very negative physical and psychological effects. While there is much that remains unknown about the causal connections, it is indisputable that excessive stress inflicts significant harms. It is also indisputable that contemporary capitalism has intensified the general stress level. The good of capital was furthered at great cost to human well-being.²⁸

* Ownership and control of traditional mass media (Fox News, newspapers owned by right-wing ideologues, fundamentalist and secular right-wing radio like the Sinclair empire of stations in the US, new social media messaging funded by reactionary factions of capital, and so on), enabled the war on labour to be played out in the cultural sphere. Unions were portrayed as against progress and freedom, a bastion of the privileged, corrupt, and lazy. What was in effect a classic divide and conquer strategy was implemented (whether intentionally or not matters not), as if the economic stress felt by so many white households could be explained by the paltry welfare payments received by people of colour (and as if most welfare did not go to white families, or corporate welfare was not government largess writ large). Cultural indoctrination into a world view dominated by resentment against the 'other' made it far easier for right wing politicians to invoke vote-winning fears and prejudices, despite an anti-labour agenda many of their voters would have rejected had it been honestly presented.

* The cultural politics of distraction also served an ideological function. A constant diet creating, and then feeding, obsessions with celebrities or bogus controversies left citizens uninformed about the social forces shaping their lives in the so-called 'information age'.

As a result of these sorts of factors, wages have stagnated despite continued productivity gains. As productivity grew throughout the neoliberal period while hourly real wage rates for production workers did not, the ratio of money surplus value to the wages of productive labour increased by about 40 percent in the US.²⁹ In the terminology of *Capital*, this represented a staggering increase in the *rate of exploitation*.³⁰

28 Wilkinson and Pickett 2010.

29 Mohun 2009, p. 1028.

30 Unsurprisingly, mainstream social theorists spoke of a new 'flexibility' in labour relations rather than a rise in the rate of exploitation.

You do not have to be a Marxist to acknowledge the pernicious social consequences of the war on labour. At the turn of the century Alan Greenspan, the right-wing chair of the Federal Reserve Board at that time, referred to 'the traumatised worker' as a key to developments in the US economy.³¹ As the business magazine *The Economist* noted, labour's income share of GDP declined for decades across the globe.³² In the 'advanced' OECD countries median wealth was 23 percent lower in 2018 than it was in 2000, 'eroding the welfare of the bottom three quintiles of the population by income level (roughly 500 million people in 22 countries)'.³³ The increased social power and luxury consumption at the top has been accompanied by increasing 'deaths of despair'.³⁴ To not find the social consequences of the war on labour as pathological is itself a sign of social pathology.

Liberal democrats and social democrats hold out hope that political reforms can end the war and reverse the losses of working people. Reforms are certainly possible at the margins. But, as argued in the previous chapter, the inherent antagonism between labour and capital in capitalism is not a contingent matter that can be reformed out of existence. It is a defining feature of the capital/wage labour relation. The present chapter goes beyond that general claim: the intensification of capital's war on labour in recent decades is not simply 'capitalism as usual'. From the standpoint of capital accumulation raising the rate of exploitation compensated (to a degree, at least) for the tendency for the time surplus profits can be won from innovations to be greatly compressed. If there had been no war on labour, would profits have recovered so quickly from the global slowdown of the 1970s? The answer is almost surely no. Had the war on labour not been intensified then, a global depression of horrific proportions would have been all but inevitable.

31 Woodward 2000, 168.

32 'The "labour share" of national income has been falling across much of the world since the 1980s. ... That sort of decline is not supposed to happen. For decades economists treated the shares of income flowing to labour and capital as fixed (apart from short-run wiggles due to business cycles). When Nicholas Kaldor set out six "stylised facts" about economic growth in 1957, the roughly constant share of income flowing to labour made the list' (*The Economist* 2013).

33 Manyika et al. 2020, pp. vi, 1.

34 The loss of jobs from deindustrialisation in cities with a considerable black population was soon followed with a wave of drug addiction resulting in early deaths. For many white Americans this confirmed racist stereotypes. But when comparable economic stress hit working-class white communities in the South, the Appalachians, and the Rust Belt, the pattern repeated itself. The life expectancy of middle-aged (non-Hispanic) whites has decreased in the United States since the 1990s. The differences in the two cases – in one

Looking forward, the war on labour will likely ebb and flow in intensity. Worker victories will sometimes follow defeats. But as long the relative proliferation of national innovation systems persists, the accompanying tendency for competitive advantages from innovation to be eroded relatively quickly will persist as well. And as long as that is the case, it would be naïve to think that the aggressive war on labour will significantly slacken.

The war on labour may have been necessary for capital's path forward from the global slowdown of the 1970s. It was not, however, sufficient by itself.

3.2 *An Expanded Intellectual Property Rights System*

If the spread of effective national innovation systems has created a major problem for capital by tending to significantly lessen the time competitive advantages from innovation can be enjoyed, there is a very obvious way to address the problem: put the tendency out of play by extending intellectual property rights. When the state's coercive powers are used to bestow and enforce artificial monopolies of intellectual property, units of capital holding these monopoly rights are not threatened with loss of competitive advantages, even if the innovations could be duplicated within other national innovation systems relatively quickly. The extension in scope and enforcement of IP rights has accordingly been a second response to the persisting threat of overaccumulation difficulties.

In previous periods of capitalist development trade secrets were the central form of intellectual property. The first enterprise or enterprises to commercialise an innovation successfully generally enjoyed significant first-mover advantages, able to appropriate high profits for an extended period so long as insiders did not reveal its secrets. In these earlier periods the scope of patents and copyright was relatively restricted. Scientific laws could not be patented. Innovations that were 'obvious' applications of widespread background knowledge were ruled out, as were living organisms. Non-profit universities were seen as sites for the pure pursuit of knowledge for its own sake. When researchers in universities developed forms of knowledge with commercial implications, that knowledge was disseminated as a free public good. (Seeds developed in agricultural research at land grant universities, for example, were made freely available to farmers through agricultural extension programmes.)

The term 'technoscience' captures the increased dependence of technological products on scientific developments. The blurring of the lines between

case crack provided the poison for 'deaths of despair', in the other alcohol and opioids – matter far less than the common roots of the striking reversal of life expectancy in the US (See Case and Deaton 2020).

science and technology provided a cover for the extension of the intellectual property rights system. The boundary lines between the non-patentable and the patentable shifted, the latter expanding as the former shrank. In genetic engineering, for example, instead of categorising the understanding of how to produce a genetically altered organism as scientific knowledge of living beings (genetics), and therefore not patentable, the organism was considered as an artifact of engineering, and therefore patentable. What counted as 'obvious' (hence non-patentable) applications of general knowledge, was interpreted in much narrower terms. Universities where important research was undertaken (and the university researchers who undertook it) were now allowed to claim intellectual property in results emerging from university labs. The financial health of universities came to increasingly depend on licensing agreements with private corporations. The researchers who saw a possible commercial application of their work were encouraged to form start-up companies that could be nurtured in university research parks, lured by the prospects of becoming wealthy from initial public offerings of equity. The commercialisation of universities moved forward relentlessly at breath-taking speed.

The US government has consistently made the global extension of the intellectual property rights system the highest priority of trade agreements whichever party was in power. The term 'free trade' is more than a bit ironic in this context, since these agreements called for increased use of the coercive powers of states to restrict trade with countries not adhering to the very strong intellectual property rights system endorsed by the US.

For US capitals able to take advantage of what was (and remains) the world's preeminent national innovation system, the extension of intellectual property rights was a most welcome response to the global slowdown of the 1970s. The threat of a quick erosion of competitive advantages from innovation abated. Units of capitals able to claim intellectual property in crucial innovations in the information technology and biotechnology 'revolutions' joined the top ranks of profitable companies in the world market. The almost unimaginable wealth won by early investors in high tech companies encouraged venture capitalists to fund a steady stream of high-tech start-ups, hoping to find the next Apple or Google. It seems very doubtful that innovation in the global economy would have been so continuous and so dynamic in a capitalist world market where so many national innovation systems operate at or close to the scientific-technological frontier in so many sectors had the intellectual property rights system not been extended in scope and enforcement.³⁵

35 In this context, as in so many others, the rise of China intensified the inherent tendencies

The benefits enjoyed by a relative handful of capitals, however, have come at the cost of serious social pathologies:

* An intellectual property is by definition a monopoly right, enabling monopoly prices to be charged and monopoly profits to be won. Extending the intellectual property rights system therefore exacerbates the systematic tendency to concentration and centralisation of capital.³⁶

* Concentrated corporate power grants power over individual workers, local communities, and the political process. Extensions of the intellectual property rights system extends these anti-democratic distortions of social life.³⁷

* With the extension of the intellectual property rights system, more resources must be devoted to unproductive legal expenditures attacking and defending intellectual property claims, negotiating favourable cross-licensing agreements, purchasing companies solely to obtain their intellectual property, and so on. Large companies generally have the most resources to meet infringement suits with counter-suits, negotiate favourable cross-licensing agreements, purchase companies solely to obtain their intellectual property, and so on, further exacerbating the already strong tendency to oligopoly.

* Research undertaken by firms has become increasingly devoted to duplicating profitable innovations just enough to avoid being found guilty of infringing intellectual property. While this may sometimes result in useful products, most often it simply provides another way of addressing a market already well served, while unaddressed social needs remain

of the capitalist world market. 'Since 2006 it [China] has pursued a deliberate policy of gathering as many patents as possible and developing home – grown-technologies – not least because Chinese companies pay around \$2 billion a year in licensing and royalties to American firms alone ... Chinese firms are also increasingly seeking patents abroad, a sign that they plan to protect their technology when exporting it to rich countries. They won 90 patents in American in 1999 but last year they received 1,225'. *The Economist* 2009, p. 68.

36 The 'concentration' of capital occurs when a unit of capital grows internally; 'centralisation' refers to growth from the take-over of other units.

37 The work conditions at Amazon warehouses comes to mind, as well as the bidding wars waged by municipalities to offer the best package of subsidies to attract investment from Google or Apple, and the ability of incredibly profitable high-tech firms to minimise their taxation (Pistor 2019). The continued erosion of capitalist democracy by the political power of oligopolies belongs at the top of this list (see MacLean 2018).

unaddressed.³⁸ Big Pharma firms, for example, devotes far more funding to the search for duplicates of the most profitable drugs than they do on R&D searching for new medicines.³⁹

* The more intellectual property rights are extended in scope and enforcement, the more opportunities there are for firms to claim intellectual property even when they have no intention of using an innovation themselves, but simply wish to block competitors from potentially profitable investments.

* The greater monopoly profits from intellectual rights, the greater the incentive for dominant firms to use their considerable economic and political power to hamper breakthroughs threatening their established monopolies. Start-up companies attempting to bring to market innovations to market threatening to make the products of incumbents obsolete can be bought up and their projects shut down or slowed until the incumbents have extracted desired returns from their previous investments. The most powerful corporations are also able to discourage research at public and university labs on paths that might threaten their monopolies.⁴⁰

* R&D paths that promise to aid human flourishing will not be pursued if they are unlikely to result in scientific-technological knowledge that can be claimed as intellectual property.⁴¹

* Networks have ‘network effects’; the more people join a network, the more useful that network is to its users. The first network to be used by a critical mass of people is therefore likely to attract even more users, with the result that establishing an alternative network of similar scale becomes close to impossible. When this tendency to a ‘natural monopoly’ is compounded with an artificial monopoly of intellectual property in crucial network technologies, the concentrated economic power of the unit of capital over workers, communities, technological developments, and the political process becomes yet more extreme.

* The previous chapter described a virtuous circle where wealthy countries, able to afford innovation systems granting associated units of cap-

38 This shows that extending intellectual property does not completely remove the threat of excess productive capacity. Firms may simply devote efforts and resources to designing around existing intellectual property claims.

39 Baker 2004.

40 The way corporate agribusiness has dominated the research agenda in agriculture is an especially striking example. See, for example, van Deelen 2024.

41 See Galvani et al. 2020.

ital competitive advantages in global markets, can maintain innovation systems providing competitive advantages in the future. Poor countries, in contrast, unable to afford to establish an effective innovation system today, are unable to amass the wealth required to establish an effective innovation system tomorrow. Strengthening the global intellectual property rights system strengthens the tendency for both virtuous and vicious circles to be reproduced. It thereby strengthens as well the tendency for social pathologies associated with severe inequality and poverty in regions trapped in the vicious circle, including malnutrition, high rates of infant and mother mortality, low life expectancy, increased social fragmentation and social instability, forced migration, and so on.

Many, perhaps most, social theorists today acknowledge that something has gone profoundly wrong with the intellectual property regime.⁴² Calls for reforms are not at all rare. In the critiques, however, one question goes unasked: if the system of intellectual property had not been expanded in scope and enforcement, would the global slowdown of the 1970s have led to a far more severe recession, or perhaps a major global depression? The extension of intellectual property rights has not spurred a faster rate of innovation.⁴³ Nor has it spurred an increase in productivity or aggregate investment in production capitals. But in the short-to-medium term, at least, the extension of the intellectual property rights system has furthered the valorisation of a relative handful of firms integrated within leading national innovation systems. Together with the war on labour, the extension helped provided a path forward for capital in the new era characterised by an unprecedented proliferation of national innovation systems and the accompanying persisting threat of excess capacity in leading sectors.

The irrationality of the intellectual property system is a corollary of the irrationality of the persistence of capitalism in our moment of world history. What has perhaps been capitalism's greatest strength, its innovative dynamism, has now become a roadblock to the appropriation of surplus profits over an extended period, and therefore a roadblock to 'healthy' capitalist development based on a high rate of investment in production. It has led instead to a persisting threat of excess productive capacity (overaccumulation) and low profits. It is very likely that even the combination of an unrelenting war on labour and a

42 See Christophers 2020, Chapter 3; Pistor 2019, Chapters 5–6; Boldrin and Levine 2008; Breznitz 2021.

43 Boldrin and Levine 2008; Breznitz 2021.

significant extension of intellectual property rights would not have been sufficient to provide a path forward for total social capital after the global slowdown of the 1970s. Much more was needed. Much more was provided.

3.3 *The Explosion of Credit and Financialisation*

We can begin by returning to the pattern of systematic cycles in capital accumulation Marx discerned, with phases of upswing, overaccumulation, overexertion, and an extended downswing preparing preconditions for a new upswing. Of special interest here is the way an upswing could be extended after overaccumulation difficulties began to emerge, spurred by injections of credit. In the 'overexertion' phase of the cycle creditors were initially motivated to help borrowers endure what were thought to be temporary disturbances in the market. Later, they hoped to prop up borrowers so that they could survive evident difficulties and repay loans that would otherwise have to be written off. Since creditors' liabilities were unchanged, writing off too many loans on the asset side of their balance sheets would lead to lenders' insolvency. Far better to roll them over and hope that other debtors and the creditors they have borrowed from would bear the costs of a slowdown. Lending also continued, or even increased, in the hope of getting in on 'the next big thing'. As profit and growth rates slowed for established firms and sectors, new schemes promising riches proliferated. Almost all such promises were oversold; many were outright fraudulent. Money was made nonetheless, for a while.

In Marx's account these extensions of credit could prolong an upswing for only a brief time. In the production sector of the economy loans to firms allowed capacity to expand, requiring yet further credit injections for the increased output to be sold. Ever-greater amounts of credit were required to obtain a given unit of growth. Awareness grew that the expansion of credit in the aggregate was unlikely to be repaid out of expanded accumulation. As it did, the moment where lenders turned from rolling over debts to calling them in loomed ever closer. As soon as some began to call in loans, a mad rush by debtors to obtain hard cash followed. As the most vulnerable borrowers went under, the solvency of their suppliers, distributors, and creditors was undermined, setting off a relentless chain reaction of further insolvencies.

A similar dynamic held in the financial sector. As the scale of credit expansion increased in the overexertion phase, the price of speculative financial assets increased, setting off a self-sustaining speculative bubble. The price increases appeared to justify yet further speculations. Investors may have worried that the price of the assets had been 'decoupled' from reasonable estimates of future earnings, making it foolish to purchase them. But as long as the prospect of a bigger fool coming along to purchase assets at yet more inflated

prices remained, the lure of capital gains kept the dance going. The overexertion phase depended on some lenders having faith that others would expand credit to these bigger fools in sufficient quantity. Sooner rather than later, the risk that a bigger fool with adequate funding would not come along was too great for too many lenders. Not wanting to be the fools themselves, they ceased new lending and called in previous loans. The mad rush to dump financial assets for world money (gold in Marx's day) set off the very price declines their owners feared. As the value of overvalued assets plummeted, the fictitiousness of much fictitious capital was starkly revealed.

When the overexertion phase abruptly concluded, a severe and extended recession or depression would commence. Both excess productive capacity and financial assets were devalued or destroyed on a massive scale. Eventually the subordination of credit creation to the needs of production capitals was re-established, a key precondition for a new phase of upswing to commence.

Engels inserted a note in Part 5 of Volume III referring to the discovery after Marx's death that financial crises could be moderated when the Central Bank responded to a credit crunch with an infusion of liquidity.⁴⁴ While noteworthy, this implied only a minor modification of the cyclical pattern Marx sketched. The proliferation of credit still rested on an assumption that credit claims could be translated into 'high-powered' money (gold) if and when they needed to be. That assumption was still plausible only as long as it was not likely to be tested on a significant scale. As soon as it was tested, the immense disparity between the nominal value of paper assets circulating in the economy and the available amount of commodity money moved to the forefront of investors' consciousness. Government policies to keep credit flowing might help in the short run, but worried investors were still likely to dump their paper assets for gold while they could. That action remained rational from a standpoint of individual investors, since those waiting too long would likely be wiped out.

A main thesis of this chapter is that contemporary capitalism is in important respects qualitatively different from earlier forms. It does not operate in the same way it did in Marx and Engels's day, or even as it did prior to the global slowdown of the 1970s. The proliferation of national innovation systems has imposed unprecedented challenges to the valorisation process that did not exist before, intensifying the threat of overaccumulation. A war on labour waged on an unprecedented global scale has been one response to this state of affairs, the unprecedented extension of intellectual property rights another. A third must now be added to the list: *the unprecedented explosion of create*

44 Marx 1981, p. 620.

money.⁴⁵ The sort of severe recession or depression that in the past soon followed the outbreak of extensive excess productive capacity can now be indefinitely deferred, thanks to the explosion of credit money. Capitalism today is qualitatively different from what it has been in the past in that *the overexertion phase of capitalism's cyclical development can be extended beyond previous limits*.

We can elaborate on this transformation by returning to the historical narrative at the point where the post ww II boom concluded. The slowdown was due primarily to the overaccumulation of investment in productive capacity in key sectors from the rise of West Germany, Japan, South Korea, Taiwan, and other favoured US allies in the Cold War. As noted above, if the cyclical pattern of capitalist development Marx discerned had been maintained, the scale of the devaluation and destruction required to eliminate excess capacity in the 1970s would have been horrific. Even worse from the standpoint of US policy elites, units of capital from its allied regions had leapfrogged over US capitals in key sectors, offering better quality products at lower prices. If there had been a bloodbath of devaluation and destruction of capacity, US capitals would have borne the brunt of the devaluation and destruction. The hegemonic position the US had seized in the twentieth century would have been undermined.

The central banks of nations with trade surpluses with the US had accumulated vast amounts of dollars. In the dollar-gold system the US had imposed on the world in the Bretton Woods agreement at the end of ww II, these surplus nations had a right to demand gold in return for their dollars. The continuous outflow of gold from US vaults reached the point where the dollar's status as the dominant global currency threatened to become eroded. The Nixon administration removed the threat by unilaterally dismantling the (US imposed) international monetary system that had governed global capitalism since World War II, replacing the dollar's tie to gold (and other currencies' ties to gold, mediated by their tie to the dollar) with pure fiat currencies.

There were a variety of factors in favour of the dollar maintaining its position as *de facto* world money in the new circumstances. Key commodities in global trade – oil, weapons, and drugs in particular – continued to be bought and sold in dollars on the world market. The demand for dollars from regions wishing to obtain these commodities remained strong. Also, nations that had accumulated dollar surpluses (specifically, OPEC countries along with others with a positive trade balance with the US) needed to do something with them. British and US financial institutions had the expertise and infrastructure to

45 See Duncan 2012, 2020, and Westra 2012.

manage global flows of these 'Eurodollars'. As long as dollar investments promised good returns, accumulating reserves of dollars to invest still made sense.⁴⁶ Also, the shift to pure fiat monies imposed new risks on those holding national currencies from the scale and speed of changes in their relative values. Core financial institutions, having developed expertise hedging agricultural risks in futures markets, were able to use those skills to construct derivatives designed to hedge risks associated with volatility in currency markets.

There was, however, a major problem from the standpoint of US policy makers: the powerful inflationary tendencies in the US economy. In the 1970s US capitals had the power to use the injection of credit money to raise prices in the hope of maintaining profits. Many unions had the power to struggle successfully for higher wages in response to increased prices. The result was a price/wage inflationary spiral, conjoined with continued stagnation due to persisting overaccumulation difficulties – a 'stagflation' reflecting the balance of class forces.

In the absence of gold or some other commodity occupying the position of 'high powered money' in the world market, a national currency can claim the special status of the primary form of world money only if capitalist investors are convinced it will maintain its value over time. This can only be the currency of a strong state whose governing elites can be trusted to be (and remain) committed to that stability. To maintain the dollar's hegemonic role, then, required a war on inflation. This was not a second war in addition to the war on labour. The shift in the balance of power in the capital/wage labour relationship in capital's favour brought about by the Volcker Shock and other measures both increased the rate of exploitation and allowed stagflation to be overcome, albeit at the cost of the recessions of the late 70s and early 80s.

After the war on labour had done its work the dollar's claim to pre-eminence was unchallenged. The dollar ironically provided a fairly secure store of value in an increasingly turbulent global economy (ironic because the turbulence was due in good part to US policies).⁴⁷ With its special status secured, the dollar could continue to directly or indirectly mediate most global capital flows. And once workers lost the power required to maintain real wages and labour's share of GDP, credit could be created to an unprecedented degree.

In 1945, after years of government deficits to fund the costs of World War II, total debt in the US economy was \$355 billion. By 1964, total credit in the USA just exceeded \$1 trillion. By 2007, the figure had skyrocketed to an astounding

46 Political pressure on these regions to continue using the dollar by the US was no doubt a factor as well. See Gowan 1999.

47 Brenner 2006.

\$50 trillion.⁴⁸ Throughout this long period inflation in labour and consumer markets remained low. Commentators termed this state of affairs 'The Great Moderation', wilfully blind to its underlying social relations.⁴⁹

The USA, enjoying the privilege of having a national currency serving as the dominant form of world money, has been able to extend the credit creation process far beyond most other regions. Nonetheless, the explosion of debt has been a truly global phenomenon. Authors of a 2015 McKinsey Global Institute report noted that, 'Since 2007, global debt has grown by \$57 trillion, raising the ratio of debt to GDP by 17 percentage points'.⁵⁰ Total debt in China, for example, more than tripled from \$2.1 trillion in 2000 to \$7.4 trillion in 2007. It then increased 400% to \$28.2 trillion by 2014. Comparably significant increases occurred in Japan, South Korea, Australia, Germany and elsewhere.⁵¹

Based on data from the Institute of International Finance, global debt – private and public – by the end of 2021 was well over 350 percent of global GDP, and it has been climbing fast for decades (from 220 percent of GDP in 1999) ... The ratio has never before come close to this level in advanced economies or emerging markets. ... With global income growth flagging, countries, corporations, banks, and households owe more than they can repay in most foreseeable scenarios ... [W]e are racing toward an inflection point that will alter life for lenders and borrowers whether public or private, prudent or profligate.⁵²

It is still not adequately appreciated how the explosion of debt helped the US and the global economy as a whole avoid a massive devaluation and destruction of the excess fixed capital after the global slowdown of the 1970s. In strong states with their own domestic currencies credit could now be extended indefinitely, with profound implications for both production and financial capital.

Regarding production capital, a level of productive capacity that in other circumstances would have set off an overaccumulation crisis is not excessive if

48 Duncan 2012, p. 2.

49 As we have seen, however, in a rare moment of lucidity Alan Greenspan did acknowledge that the moderation of inflation in labour and consumer markets rested on 'the traumatised worker' (Woodward 2000, p. 168). Anticipating the discussion below, it should also be noted that the continuous inflation of the prices of financial assets in this period made all talk of a 'great moderation' in inflation an ideological obfuscation.

50 Dobbs et al. 2015, p. vi.

51 Dobbs et al. 2015.

52 Roubini 2022, pp. 13–14.

credit expansion enables increased output to be absorbed. The absorption of increased output in turn encourages investment levels to be higher than they would otherwise be. For established companies and their investors – at least those with extensive intellectual property holdings or other privileged positions – the explosion of credit meant high profits. Like steroids taken by weightlifters, artificial stimulus has enabled markets to expand artificially, absorbing (valorising) productive capacity that would otherwise not have been absorbed (valorised).

The explosion of credit money has also meant that more funds have been available for investment in high tech start-up companies by venture capitalists than otherwise would have been the case, while also supporting an investor class clambering to invest in the start-ups when initial public offerings gave them a chance to do so. The innovative dynamism of the centres of the capitalist global system has remained strong despite the persisting threat of overaccumulation.

Due to that persisting threat, however, a growing portion of the credit created in the global economy after 1980 has remained within the financial sector where it was created.⁵³ Injecting an absolutely unprecedented amount of liquidity in the global economy spurred an absolutely unprecedented inflation in the prices of financial assets. Thanks to credit-fuelled self-sustaining bubbles in financial assets, ‘capital gains’ are much more loosely connected to the production of value in Marx’s sense.

The connection between financial capital and production capital may be looser, but the spheres remain intertwined. The role of venture capital and initial public offerings in nurturing start-ups of productive capital has been mentioned. The so-called ‘wealth effect’ is another example of the way finance and production are connected. While those made wealthy from financial investments save a greater proportion of every additional dollar than most others, it is still the case that as their wealth increases, they spend more. And extending credit to non-wealthy households can increase spending levels as well.⁵⁴ This enables productive capacity that would otherwise be wasted to be

53 In 1981 the debt of the private sector in the US equalled 123% of GDP; by the end of 2008 it had reached 290%. While corporate debt increased from 53% of GDP to 76% and household debt jumped from 48% to 100%, the financial sector’s debt increased fivefold, from 22% of GDP to 117% (Roubini and Mihov 2010, p. 83).

54 Prior to 2008 the debt-fuelled paroxysm of hyperconsumerism in wealthy households, and the ability of other households to maintain their standard of living through increased debt, resulted in the US consumer market becoming in effect the primary ‘engine’ of global growth. The resulting US trade deficit was matched by purchases of financial assets (Treasury bonds, housing derivatives, and so on) from surplus countries such as China. As a result

deployed profitably. It is also the case that the most inflated prices of financial assets tend to be associated with units of production and distribution promising high monetary returns in the future from the production and circulation of commodities.

Thanks in part to the explosion of credit money, the global slowdown of the 1970s did not lead to a truly catastrophic global depression. From the point of view of human suffering, that must be considered a good thing. Nonetheless, the explosion of debt has generated social pathologies in addition to those generated by the war on labour and the extension of the intellectual property rights regime.

The explosion of credit contains the threat of overaccumulation difficulties in non-financial sectors. It does not remove that threat. It has in fact exacerbated it. By providing venture capitals, investors in initial public offerings, and so on, with massive funds to put at the disposal of entrants in new sectors, the explosion of credit strengthens the tendency for even the most dynamic new sectors to face potential overaccumulation problems more quickly than in previous periods of capitalist development.

As new capitals arise, old ones fail to pass away. So-called ‘zombie capitals’ walking the planet in increasing numbers, kept alive by infusions of cheap credit. In the business press ‘zombie capitals’ is now an accepted technical term to refer to companies spending more on interest payments than they earn, surviving only because access to cheap credit enables them to roll over interest payments.⁵⁵ This phenomenon is generally blamed on the extreme monetary policies of central banks in the years following the Great Recession, when interest rates were kept unprecedentedly low for an unprecedented period of time. It began, however, much earlier.⁵⁶ We can also ask why the standard notion of zombie capitals should be accepted. Why not include in the ‘zombie’ category *all* capitals that would have gone under had levels of investment and consumption not been propped up by unprecedented injections of liquidity by banks and shadow banks? Of course, the set of zombies in this broader – admittedly counterfactual but still illuminating – sense cannot be precisely determined. But it is indisputably far larger than in any previous period of cap-

of these flows China and the US were responsible for 45–60% of all global growth in the period immediately prior to the ‘Great Recession’, with the US absorbing an astounding 70% of the net capital flow in the world economy. See Westra 2012, pp. 19, 20.

55 See, for example, Lee and Contillano 2020; Banerjee and Hofmann 2018; Clenfield 2017; *Financial Times* 2017; Giles 2013; Stothard 2013.

56 Duncan 2012; Smith 2018a.

italism.⁵⁷ Is there any unit of capital of which we can say with certainty that it would not be included in the wider definition?

Under these circumstances, rates of profit remain under great pressure for production capitals that do not hold extensive intellectual property or some comparable pricing power.⁵⁸ Disappointing profits discourage high levels of new investment (interestingly, extensive pricing power does as well). Under these circumstances attempts to raise the rate of exploitation will continue to intensify. The use of state power to shift the costs of ongoing 'secular stagnation' to other regions of the world will continue to become more desperate. The thought of sacrificing profits for the sake of improving the environment the social world is part of will remain intolerable to powerful factions of capital. Capital's innovative dynamism is not a means of overcoming these social pathologies; the more the former is pursued, the more the latter become entrenched. This is what it means to say that capitalism has reached world historical limits.

Turning to the financial sector, the most obvious pathology associated with the explosion of credit is the regular occurrence of financial crises. There were 38 financial crises between 1945 and 1971. With the inexorable rise of capital asset inflation, the tally jumped to 139 between 1973 and 1997.⁵⁹ The dot.com and housing bubbles soon followed, and the pace has not slowed since (the regularly recurring cryptocurrency apocalypses provide striking examples). It is widely understood that the tsunami of liquidity flooding the world from the unprecedented quantitative easing programmes of the Fed and other central banks after 2008 has not unleashed a corresponding torrent of investment in non-financial sectors. This liquidity instead generated an astoundingly rapid recovery of stock markets after the Great Recession, reaching unprecedented heights. Extreme monetary policies succeeded on an even bigger scale in response to the Covid outbreak, with liquidity provided by Central Banks again propping up financial markets wildly overvalued by traditional measures.

In the 'standard view' of capitalism the proper role of the financial sector is to serve as a means for the efficient allocation of resources to the firms in the real economy promising to contribute to the fulfilment of human wants and needs most effectively. If the financial system clearly has failed at its intrinsic task, progressive advocates search for some extrinsic explanation: a failure of

57 See Smith 2017b.

58 Christophers 2020.

59 Wolf 2008, p. 31.

business schools to teach the importance of business ethics; distorted incentives that distort the behaviour of borrowers, lenders, and ratings agencies; misguided legislation mandating credit flows (mortgages) to poorer citizens; the effectiveness of political lobbying by the financial sector; the ideological power of the theory (or, better, the myth) of rationally efficient financial markets; the ‘forgetting’ of Keynes’ message that the financial system required effective political regulation to fulfil its proper role, and so on.⁶⁰ These quite disparate accounts share one important point in common: they all suppose that the excesses of the financial sector in recent decades could have been avoided if only there had been sufficient political will to do so.

The alternative view defended here does not assume that the inherent purpose of the financial sector is to support producers promising to provide goods and services effectively addressing human wants and needs. Its ultimate purpose is valorisation, the transformation of M into M' . The explosion of credit money has enabled investments in productive capacity in non-financial sectors to be valorised that would otherwise have been devalued or destroyed. Together with the war on labour and the extension of intellectual property, it has allowed a recovery of profits justifying continuing investments in production capitals. But the explosion of credit did not eliminate excess productive capacity in the major sectors in the world economy. It has exacerbated the problem by keeping more and more zombie firms (in both the narrower and the wider, more illuminating, sense of the term) alive, by aiding the build-up of new productive capacity in China and elsewhere, and by fostering excess productive capacity in new sectors.

In a world that remains haunted by the threat of excess productive capacity there is no reason to expect rates of investment in non-financial sectors to jump upwards, no matter how much new credit is created in the global economy. Potentially severe overaccumulation difficulties are merely contained rather than removed. As a result, the rate of investment in (and by) production capitals will remain low by the standards of previous periods of ‘healthy’ (for capital) capitalist development. Investors with access to credit money will necessarily tend to seek some other way of transforming M into M' . Many have found it in financial speculation, which in these circumstances often offers more favourable prospects for monetary returns than other uses of newly created credit money.

60 Davidson 2009, Blinder 2013, and Admati and Hellwig 2014 can be taken as representative instances of what is now an immense literature.

The dynamic is worth repeating. Suppose, for example, a critical mass of investors accepts the narrative that a set of firms is likely to introduce innovations in the future enabling them to expand. The price of purchasing equity in them will tend to rise. As it does, investors win significant gains, reinforcing the rhetorical power of the narrative. This attracts new investors, leading to greater gains, a further reinforcing of the now dominant narrative, and a further wave of new investments. Credit can explain how a self-sustaining bubble can be set off at this point. Investors whose paper wealth has increased as a result of an inflation in the prices of financial assets are generally able to increase their borrowings, since they appear to be extremely good credit risks. If a large portion of the new borrowings are used for further investments in the same financial assets, that will further inflate them in price. With increased wealth, the status of holders of those assets as good credit risks is reinforced. Even more credit can be put at their disposal and used to inflate the bubble in the capital assets yet more.

The ability of borrowers and lenders to convince themselves that 'this time it's different' should never be underestimated, even as the value of the financial assets becomes decoupled from any reasonable assessment of the likely future prospects of the firms whose equity has been purchased. Once the narrative explaining why the future prospects are so rosy has become dominant, financial agents who issue warnings will be ignored. After all, they aren't making money while so many others are. Regulators who warn of a self-sustaining bubble will suffer the same fate. The 'capital gains' that are won may be disconnected from the valorisation of privately undertaken labour as social labour, that is, the production of value in Marx's sense. But in capitalism fetishism is not a subjective illusion. It is an objective material fact about money that it embodies social power in the form of a thing. That is as true of money accumulated from financial investment as it is from investments in industrial or commercial capitals.

The regular recurrence of financial crises shows that the tendency for speculative bubbles to collapse remains an essential determination of the capitalist mode of production. But with world money no longer being a scarce commodity, a banking system able to create a form of world money *ex nihilo* (or a domestic currency whose exchange rate remains stable relative to a currency servicing as world money) can put this tendency out of play seemingly indefinitely. When financial crises occur, not only can sufficient credit money to prevent the financial system from imploding be created by central banks, but enough can be generated to enable financial asset inflation to soon recommence. Central bankers may not want to play this role. But fear of the massive devaluation and destruction of value (whether fictitious or not) that might oth-

erwise occur forces their hand. Contemporary capitalism remains stuck in what Levy has termed ‘the Great Repetition’, where injections of liquidity enable continued capital accumulation at the cost of financial bubbles that require the massive injection of liquidity to be repeated yet again.⁶¹

4 Conclusion

I have argued in this chapter that the cyclical pattern Marx detected in the capitalism of his day (upswing, overaccumulation crises, overexertion, financial crises, extended and severe recession or depression) has been qualitatively transformed in two ways. First, the moment of overaccumulation difficulties, which Marx thought arose at the end of an extended upswing, is now a perpetually threatening condition, due to the relative proliferation of relatively effective national innovation systems. As Section 1 showed, the argument for this conclusion appeals only to premises that are not seriously disputed. Section 2 then sketched the historical process leading to this state of affairs.

The second modification of the pattern, the main theme of Section 3, is that the overexertion phase that Marx saw as a relatively brief moment in capitalist cycles of accumulation has been extended far beyond what he would have considered possible. The phase he thought was a passing moment between the end of an upswing and the commencement of a ‘slaughter of capital values’ has lasted for decades despite the continuing threat of excess productive capacity in the major sectors of the global economy. Thanks to a war on labour (3.1), an extension of intellectual property rights (3.2), and an explosion of credit money (3.3), capital accumulation has continued, even if rates of investment and growth have been modest. This has come at the cost, however, of serious social pathologies.

The war on labour has brought higher levels of economic inequality, economic insecurity, stress, mental illness, deaths of despair, and countless other barriers to human flourishing. When monopolies granted intellectual property rights raise prices of medicines beyond the reach of those who desperately need them, that too profoundly restricts human flourishing. Extensions of intellectual property have also brought about concentrations of economic power extreme even by capitalist standards. The human impacts of financial excess are similarly pathological. The vulnerable are preyed upon, while the

61 Levy 2021, Afterword.

costs of more frequently occurring financial crises are concentrated on those who benefited little from the speculative bubbles preceding them.

For many defenders of the standard view of capitalist market societies, these social costs are invisible. For others, they are simply a price that must be paid. For yet others, they are due to a 'deep state' run by nefarious 'socialists'. These sorts of positions are as much 'beneath all criticisms' as the defences of the *ancien régime* Marx dismissed. It is an immediate political priority to vehemently oppose such views. But from a theoretical standpoint, there is not much there.

What of the liberal democratic republicans who hold out the hope that a reformed financial system, combined with progressive labour policies, a reformed intellectual property rights system, and related measures, could bring about a new epoch of dynamic capitalist development where the pathologies of neoliberalism are overcome? In terms of a challenge to the socialist project, this position is far more significant than the rantings of lunatic reactionaries. If capitalism could be sufficiently reformed, a transition to socialism would not be required.

Suppose for the sake of the argument we put aside for the moment the Marxian critique of capitalism and its inherent tendencies presented in the previous chapter. There would still be a compelling reason to regard the reformism of liberal democrats and social democrats as profoundly inadequate: capitalism has reached world historical limits. This does not mean that its final collapse is around the corner. In the absence of collective political action, it may be able to continue indefinitely. It does mean that the sort of 'healthy' capitalist development reformers dream of, a capitalism where innovative dynamism is intertwined for an extensive period with high levels of profit and investment, rising real wages, higher living standards, and so on, is ruled out. This is due to the underlying tendency for overaccumulation problems to arise relatively quickly in even the most dynamic sectors of the world economy, rooted in the relative proliferation of effective national innovation systems. As Section 1 argued at length, while this conclusion will undoubtedly be strongly contested, the premises from which it unavoidably follows cannot be.

The vicious war on labour, the aggressive extension of intellectual property rights, the astounding explosion of debt, the irrational frenzy of finance, and so on, were all 'rational' responses to the the global slowdown of the 1970s from the standpoint of capitalist rationality. They enabled a significant recovery in profits.⁶² If there had been no war on labour, no extension of the intellec-

62 McNally 2010; Duménil and Lévy 2011.

tual property rights regime, no unprecedented explosion of debt, there almost surely would have been no way for slowdown to avoid mutating into a Great Depression, with a massive destruction and devaluation of productive capacity.

Where might capitalism go from here? The path of future historical development is radically uncertain. Nonetheless, I believe four possible paths can be discerned – none of which we should want to take.

1. Perhaps capitalism proves able to continue the phase of ‘overexertion’ indefinitely.⁶³ Perhaps the trend for the ratio of debt to GDP to increase can continue over time, as central banks alternate between attempting to raise interest rates to ‘normal’ levels and abandoning such attempts when they threaten to set off an extended downturn. Perhaps the trend for the balance sheets of Central Banks to metastasise can continue indefinitely, with periods when it shrinks alternating with periods when it must expand to prevent the global financial system from imploding.

No advocate of capitalism would regard this as a ‘healthy’ regime of accumulation. Capital accumulation is not supposed to depend on the ratio of debt to GDP increasing indefinitely. Nor it is supposed to require a Great Repetition of central banks bailing out the financial system. And it is not supposed to generate the social pathologies that it clearly generates. But this is how capitalism works in our historical moment. It is the way accumulation can continue despite the persistent threat of overaccumulation in all major sectors resulting from the proliferation of national innovation systems.

2. It is unlikely that a truly progressive reformist agenda of the sort proposed by social democrats will be undertaken in capitalist market societies. But let us consider the possibility anyway for the sake of the argument. The most serious proposal is to use the extreme monetary policies that injected so much credit into the financial sector and use them to fund government spending on the scale required to meet our environmental challenges successfully, provide full employment at good wages, and other desirable progressive goals.⁶⁴ The

63 The first chapter introduced the notion of a ‘prevalidation of value’ by financial capital. Lending the initial M prevalidates the transformation of M to M' in the given circuit, as do loans that avoid interruptions in that circuit enabling the loan to be repaid at its conclusion. The injection of credit into the present circuit that allows C' to be transformed into M' both enables previous loans to be repaid with interest and prevalidates value creation in the subsequent macro-monetary circuit(s). In principle, at least, capital accumulation can continue indefinitely despite a persisting threat of excess productive capacity, so long as these forms of credit are inserted in sufficient quantities in each macro-monetary circuit (and assuming the continuing exploitation of living labour and no serious bottlenecks in production or circulation).

64 For example, Duncan 2022; Hockett 2020; Kelton 2020.

supposedly resulting economic dynamism will bring about another 'golden age' of capitalist development, benefitting big capitalist investors and ordinary people alike. There is no need to go into the details of the different variants, since they all have the same flaws.

For this project to be successful in the capitalist world market, government spending would have to fund the development of technologies granting domestic capitals significant competitive advantages in the world market for extended periods of time despite the proliferation of national innovation systems. That would require granting them strong and extensive private intellectual property rights that were strictly enforced globally. But this would make a supposedly progressive political agenda a not so progressive economic nationalism – or, less politely, another form of imperialism over regions of the world market unable to afford to develop such competitive advantages. Treating scientific-technological knowledge that might be able to avoid or reverse serious environmental harms as privatised commodified knowledge would also limit the extent those harms were avoided or limited. In both respects this path is inconsistent with the proclaimed progressive reformist agenda.

On the other hand, if privatised claims on this scientific-technological knowledge were renounced, domestic capitals would refrain from high levels of investment in commercialising that knowledge, since they would have no special competitive advantages promising them high profits. We might imagine that if the deficit-fuelled fiscal spending of governments were sufficiently high for a sufficiently extended period of time, that could compensate for the lack of private investment. But indefinitely continued government investment on the requisite scale would either undermine the property and production relations of capitalism and institute some form of state socialism, or the private sector would direct the flow of public funds in a crony capitalism prone to corruption all the way down. Neither of those options fits with the progressive reformist agenda.

Perhaps some forms of social pathology could be avoided, or at least moderated, by successful reforms in politically favourable circumstances. But this means that the best we can hope for from the continuation of the property and production relations of capitalism is that the 'overexertion' phase can be continued into the future with minor improvements at the margin. We should not expect labour's share of national income to significantly increase, or intellectual property rights to cease providing monopoly rents to ever-more powerful oligopolies. We should expect credit money to continue increasing at a faster rate than GDP, and zombie capitals to continue to roam the planet. We should expect financial assets to continue to inflate, their ascent periodically punctuated by financial crises only to be restored by the 'Great Repetition' of Central

Bank infusions of liquidity. We should continue to expect generalised economic insecurity to persist and capitalist democracy – never that vibrant to begin with – to continue to erode. The horrific environmental costs of capitalism's 'grow or die' imperative would continue as well.

And this is the best we can hope for if capitalism continues. The worst remains to be considered.

3. The continuation of the status quo into the future is likely to provoke political disillusionment with that status quo. After all, the utopian claims of neoliberal globalisation have been revealed as delusions. The triumphalism of the 1990s that gripped the ideologues of capital so deeply after the implosion of the Soviet model is now long gone. Powerful factions of capital have proven ready, willing, and able to mobilise that disillusionment in the pursuit of right-wing policies reinforcing their right to pollute and right to avoid taxation. Combine the two and a third possible future for capitalism is all too easy to see, with right-wing economic nationalism becoming entrenched.

If this were to happen the social pathologies discussed in this chapter (the war on labour, the increased power of oligopolies, and so on) would be joined by a host of others, including:

- * Appeals to national interests demonising the foreign 'other'.

- * Explanations of economic insecurity directed towards 'the other', diverting attention away from the logic of capital while fostering divisions of race, ethnicity, formal citizenship status, religion, and any other social category able to be used effectively in 'divide and conquer' strategies.

- * Stronger dispositions to inflict violence on the 'other', whether state sanctioned or private.

- * A strengthening of the military and the military sector of the economy diverting funds and research from areas of great social need and making aggressive military actions more likely.

- * The gap between the formal elements of capitalist democracies and democratic society in a substantive sense, where all participate as equals in social life, becoming an even greater chasm.

- * An erosion of the formal elements of capitalist democracies through voter suppression, gerrymandering, the buying of politicians' votes by powerful corporations, and so on.

- * Increasing attempts to use social media and traditional media to divert attention from the way public policies favouring the interests of national capitals harm a vast majority of social agents in the national community (workers, the unemployed, women, minorities, immigrants, and so on).

* Policies actively encouraging the harmful environmental practices of polluting capitals.

The fact that regressive nationalism is a viable option is itself a condemnation of contemporary capitalism.

4. The greater extreme monetary policies following the outbreak of the Covid pandemic – even more extreme than those in the wake of the Great Recession of 2007–08 – resulted in a new stagflation when combined with disruptions to supply chains and the aggressive assertion of pricing power by capitals possessing it. A greater and greater number of ‘zombie’ firms walk among us, incapable of operating as proper units of capital (that is, as vampires, not zombies), kept alive only through greater and greater transfusions of credit. Borrowings can be shifted from one region to another, from one sector to another, from corporations to households (or the reverse), or from the so-called ‘private’ sector to the state. But perhaps sooner or later, and perhaps sooner rather than later, the capitalist economy will be littered so many decaying zombie corpses that the day comes when extreme monetary policies must cease, and the enormous quantities of liquidity maintaining the living dead capitals begins to be withdrawn. At that point a vast amount of excess productive capacity in the global economy will be devalued or destroyed.⁶⁵

A fourth possibility is that a global devaluation and destruction of excess productive capacity can no longer be deferred, and an outright global depression erupts that no region of the world escapes. The increasingly strong belief among policy elites that monetary policies must return to ‘normal’, zombie capitals must be allowed to die, the valuation of overvalued assets must become more reasonable, inflationary tendencies must be checked by higher interest rates, and so on, heightens this risk.

Which units of capital from which regions of the globe will suffer that fate? This would be an open question for the most part. At this point the perverse (capitalist) rationality of economic nationalism must be conceded. Whatever the rhetoric of political elites might be regarding the benefits of international economic cooperation, capitalist states will do what they can to protect capitals of special importance to their national economies. It is ‘rational’ for capitalist states to select policies that will shift the devaluation and destruction of value elsewhere as much as possible. The hope is that if ‘their’ capitals can hold out long enough, zombie capitals headquartered elsewhere will be the ones deval-

65 See Albert 2013.

ued or destroyed. Reactionary nationalism is likely to prove more suited for capitalism in the future than a cosmopolitan politics promising policies benefits to all.

The scale of destruction and devaluation of capital that would occur if the overexertion phase of the present period cannot be extended into the future would surely be immense; the social costs incalculable. And for what? Unless an unimaginably catastrophic historical regression returns us to a historical period where only one or two regions in the global economy possess effective national innovation systems, it would still be the case that the time competitive advantages that could be won from innovations would tend to be greatly compressed relative to earlier periods of capitalist development, along with the time before difficulties stemming from excess productive capacity arose in even the most dynamic sectors of the world market.

The conclusion that follows from this chapter's investigation of our historical moment and the paths capitalism might take from here is unambiguous. Capitalism has mutated into a form that should make even its previous advocates question whether it must now give way to a social order more capable of promoting human flourishing. None of the paths sketched above will prevent planetary boundaries within which human civilisation has developed for the last ten thousand years from continuing to be surpassed. None will prevent the prospects of human flourishing being profoundly and increasingly limited and distorted. All eventually lead to barbarism. Whatever progressive elements capitalism's innovative dynamism may once have claimed, whatever emergent possibilities still lie latent in its technological dynamism, it is well past time to recognise that no technological change is going to save us from a world where human flourishing tends to be horribly sacrificed to further the flourishing of capital. We have compelling reasons to recognise that a social order incorporating capital accumulation as an end in itself has reached a historical limit point.

The stark alternative posed by Rosa Luxemburg has never had more force: socialism or barbarism. There is both a theoretical and a practical imperative to affirm the former.

In his important book *This Life*, Martin Hägglund talks at length of the importance of what he terms secular faith.⁶⁶ No matter what we do today, the future will remain radically uncertain. We know that no matter how much we try to anticipate the consequences of our actions, they will have consequences

66 Hägglund 2019.

we do not anticipate. It could be there is nothing that can be done to prevent the collective ecocide of the human race. It could be there is nothing that can be done to bring about a social world superior to the one where capital reigns. 'Secular faith', however, demands that this cynical nihilism be rejected.

Unlike other forms of faith, the secular faith Hägglund talks of does not exceed what is reasonable to believe. Advances from a normative standpoint have been made in human history before – hereditary aristocracies and absolute monarchies have been abolished; suffrage has been extended to previously excluded groups; patriarchal and racist structures and worldviews have been successfully challenged; limits have been placed on the risks imposed on workers from toxic chemicals; and so on. If advances have happened before thanks to collective action, they can happen again.

For the secular faith required to affirm the socialist project as reasonable, there must be good reasons to believe that another, better, social world is possible.⁶⁷ The goal of the chapters that follow is to provide a good reason for that belief by outlining what another, better, social world might look like.

67 And it must be reasonable to believe that there is an acceptable path for getting from here to there. That issue falls outside the scope of the present work, although a few remarks on the all-important issues will be made in the conclusion. To anticipate: I do not see how anyone could reasonably assert that collective human intelligence and creativity is incapable of creating another, and better, social world, should one be possible. Second, the forms of organisation required to mobilise the collective intelligence and creativity required to bring about a better world must surely be an internationalist movement of movements, uniting oppressed groups together in a manner that adequately acknowledges their differences. Third, the internal relationships within this movement of movements, and external social relationships of participants with those who are not (yet) committed to the socialist project, must further forms of subjectivity appropriate to the sort of society we wish to create – ruling out, for example, cults of an unaccountable leader, sectarianism, insurrections lacking mass support, and similar phenomena. The specific forms of organisation, leadership/membership dialectic, strategies, tactics, and so on to be adopted depend to a great extent on concrete circumstances in all their contingencies. The answers to these practical concrete questions cannot be logically derived from the theoretical abstractions of either the critique of political economy or a model of socialism. Nonetheless, the latter, like the former, has an intrinsic connection to socialist praxis: '[W]ithout the proper target of the strategic offensive – oriented towards the socialist order as a hegemonic alternative to the existent – the journey itself is without a compass' (Mészáros 1995, p. 793).

A Socialist Constitution

Accepting the critical evaluation of capitalist market societies presented in the two previous chapters does not necessarily lead to embracing socialism.¹ It could be that there are no feasible forms of socialism that would count as a world historical advance over capitalism. And it could be that the forms of socialism that are feasible would not count as a world historical advance. There are no guarantees every story has a happy ending, and no guarantees history does either.

The socialist project, then, cannot be limited to critique. It must include a positive defence of the claim that a feasible and superior alternative is possible. This requires outlining an institutional framework and system of social practices capable of being reproduced over time, its main components complementing and supplementing each other in a reasonably coherent fashion. And it requires that social agents operating within that framework and undertaking those practices have the capabilities and motivations required for the new society to advance rather than dissolve into chaos.

Later chapters of this work will present a provisional account of what a socialist alternative meeting these criteria might look like. The present chapter is devoted to the question what would make a social order count as superior to capitalist market societies. Answering this question requires normative judgements. Normative judgements presuppose normative standards. What are the relevant standards? Where do they come from? What are their most general social implications?

Apart from some early unpublished writings, Marx is not usually thought of as a normative theorist. He vehemently rejected moralistic appeals in his critique of political economy, correctly judging that it did not help us understand the ‘deep structure’ of capitalist market societies. And he generally avoided moralistic rhetoric in his historical and political essays as well, preferring to provide descriptive and explanatory accounts of the events he examined, spiced with sarcasm where appropriate. Nonetheless, in both early and later writings, Marx explicitly endorsed normative principles. In the *Communist Manifesto*, for example, Marx called for a society where ‘*the free development of*

¹ And it certainly does not require that the so-called state socialism of the USSR and its satellites must be affirmed, although many defenders of capitalism assume otherwise.

each is the condition for the free development of all.² Similarly, in the *Grundrisse* Marx anticipated ‘a society of free individuality, based on the universal development of individuals and on their subordination of their communal, social productivity as their social wealth’ and where the ‘development of all human powers as such [is] the end in itself’.³ He later endorsed a version of this principle in the first volume of *Capital*, calling for a society where ‘(T)he full and free development of every individual forms the ruling principle’.⁴ The first section of this chapter argues that this ruling principle provides a framework for a socialist constitution defensible from a historical materialist standpoint.

For Marx, ‘full development’ and ‘free development’ are inextricably intertwined. Nonetheless, for ease of exposition principles more relevant to furthering the free development of every individual will be considered first in Section 2 (discussing freedom as collective self-governance without domination) and Section 3 (concerned with the particular freedom of particular social individuals). Section 4 then turns to principles especially relevant to the full development of every individual. They affirm that the socialist project includes establishing a form of social production addressing 1) the social needs of communities (more exactly, of individuals as members of communities, referred to here as *universal₁ needs*), 2) the ‘basic’ social needs individuals generally have in common (*universal₂ needs*), and 3) the *particular needs* of particular individuals.

Section 5 is devoted to two important constraints on social life demanded by solidarity across communities and across generations. As core features of the socialist project, they too warrant a place in a socialist constitution. Section 6, finally, introduces three core principles of republican socialism that cut across the other headings. The conclusion to the chapter notes the obvious but nonetheless immensely important point that constitutional principles must be embedded in concrete institutions and social practices if they are to be more than mere words.

1 Marx’s Ruling Principle

What is the status of the assertion that for a society to count as an advance over capitalism from the normative point of view its ruling principle must

² Marx and Engels 1976b, p. 506.

³ Marx 1973, pp. 158, 708.

⁴ Marx 1976, p. 739. Many other statements of a similar nature are scattered in his corpus. See Lebowitz 2010 and Shoikhetbrod 2019.

be ‘the full and free development of every individual’? From a purely formal standpoint, Marx’s statement is similar to the universal normative principles proclaimed to be the foundations of the constitutions of modern capitalist republics. Unlike familiar defences of those principles, however, Marx does not appeal to divine decrees, or to what is supposedly ‘natural’ and ‘self-evident’, or to alleged immemorial traditions, or to supposed transcendental imperatives of reason. But neither does he regard the statement as a merely subjective expression of feelings, whether his own or those of some group. The principle is asserted as objectively valid in the sense that the reasons for accepting it are compelling and superior to any reasons that can be mustered to support competing principles.

For historical materialists, the most important reasons must be historical: Marx’s principle is the most fundamental expression of *collective learning processes tied to emancipatory historical struggles*. The main historical lesson Marx appeals to is that struggles for ‘merely political’ emancipation leave domination and exploitation in place. This lesson is confirmed in the everyday experience of the working class (in the broadest sense of the term, extending to all cut off by the property and production relations of capitalism from the objective preconditions of human life – means of subsistence and the means of production to produce them), and it is confirmed theoretically in Marx’s critique of political economy. If the limitations and distortions of the forms of freedom and equality promised in the constitutions of capitalist republics make merely political emancipation insufficient, then we must struggle for what Marx termed *universal human emancipation*, that is, a society where ‘*the full and free development of every individual forms the ruling principle*’.⁵ This assertion can serve as the foundational principle of a socialist constitution, the most general statement of the aim of the socialist project.

A few remarks on Marx’s principle need to be made. First, this historical justification implies that normative principles can never be taken as immutable. Learning processes are always contestable and revisable. New historical experiences will bring previously unseen assumptions and implications to light. Lessons drawn from struggles against one form of oppression may prove to be compatible with (or even foster) new forms of domination. New perspectives may arise that need to be taken into account, as further historical developments make past lessons irrelevant and require new ones to be drawn.

Second, contestability comes in degrees. In Lakatos’ account of the methodological framework of scientific research programmes, every programme has a

5 Marx 1976, p. 739; see also Smith 2018a.

'hard core' that adherents of the programme will not lightly abandon.⁶ There is, I believe, an analogous 'hard core' of judgements and commitments those engaged in the socialist project should not abandon lightly. I take Marx's assertion as the core of the 'hard core' of the socialist project. It is a compressed summary of the main lesson to be learned from past emancipatory struggles regarding the sort of future society we need to struggle for today.

Third, the very fact that Marx endorsed a 'ruling principle' shows he did not accept crassly reductionist forms of materialism where normative principles have no place. On the other hand, the principle is not a mere ethical abstraction. Nor is it affirmed from a neutral third-person perspective. It is meant to be an action-guiding principle *for us* (first person plural) as *we* collectively struggle to bring about a different and better world. Articulating the ruling principle of socialism is not in any way opposed to the material practices making up the struggle for socialism. It is a component of those practices and that struggle. While the content of the principle can be considered abstractly, the content that matters is the *actuality* of the principle in the institutions and social practices of a society.

Fourth, the fact that Marx endorsed a ruling principle directed towards the development of 'every *individual*' reveals the error of the countless commentators who have insisted Marx was a collectivist advocating that individuals in their irreplaceable uniqueness be swallowed up into an all-devouring social whole. (Ironically, these same commentators invariably fail to notice how individuals are swallowed up by capital.)

It is certainly true that Marx rejected *metaphysical individualism*. The social world is not a mere aggregate of separate social atoms merely related to each other externally. The elements of the social world (and the non-human elements of the natural world as well) are internally related to each other in various ways, even as they retain their distinctness. You cannot be a king unless others are your subjects; personal identities in society are constituted through social relationships and social actions, and not in some secret enclosed private space.

Marx no less vehemently rejected the *methodological individualism* that attempts to explain higher order social phenomena by reducing them to the acts of individual social agents and their intended and unintended consequences, defending instead the methodological framework of emergent materialism.⁷

⁶ Lakatos 1970.

⁷ On this view, if the interactions of elements on one level are structured in the right sort of ways, a distinct higher-order ontological region with its own irreducible determinations may

Marx's rejection of metaphysical and methodological individualism, however, did not prevent him from strongly embracing *normative individualism*. Individuals in society are *social* individuals whose distinct personal identities are developed, maintained, modified, or transformed within social relationships. But the society within which they live and die is to be evaluated ultimately by the flourishing (or lack thereof) of its individual members, each with but one life to live on this planet.

Fifth, by insisting on the importance of 'every individual' Marx affirms a commitment to egalitarianism. The socialist project is to establish a 'solidarity society' where the flourishing of some does not involve systematically sacrificing the flourishing of others: 'The development of the human capacities on the one side [cannot be] based on the restriction of development on the other'.⁸ Unlike the principles explicitly underlying slavery and feudalism, and unlike the operation of capitalism in practice, Marx's ruling principle affirms that no individual or group has a superior intrinsic claim to well-being, resources, development of capabilities, opportunities, or anything else of comparable normative import. All attempts to argue otherwise have wallowed in ideological obfuscations.

It is true that Marx strongly rejected strict equality in the distribution of social wealth. In 'Critique of the Gotha Program' he complains that equal distribution ignores the particularity of individual cases, such as the different amounts of social labour individuals are able to contribute and differences in their individual needs.⁹ But rejection of *that* form of equality is fully consistent with the egalitarianism of the 'ruling principle' endorsed in *Capital*.¹⁰

emerge. The architect and the bee are both material beings 'all the way down', so to speak. But the architect's brain has a complex organisation such that in a social setting providing the requisite education and training, that brain can produce a higher-order level of imagination with its own irreducible determinations: 'what distinguishes the worst architect from the best of bees is that the architect builds the cell in his mind before he constructs it in wax' (Marx 1976, p. 284). (Marx could have added further that the imagined architectural structures have properties the neural firings of the brains of bees and architects do not and cannot have, like the properties 'designed to keep costs down' or 'designed with amenities to attract luxury-seeking oligarchs'.) As we saw in Chapter 1, when social agents are organised in the historically specific form of 'dissociated sociality', capital emerges as a higher-order ontological region with its irreducible determinations and intelligibility.

8 Marx 1988a, pp. 190–2.

9 Marx 1989. (How many critics of Marx have revealed they haven't read him closely (or at all) by objecting to the strict equality of distribution they mistakenly assume he advocated?)

10 In this important respect Marx's position is quite close to liberal egalitarianism (see Smith 2017a, Chapter 3). Liberal egalitarians also strongly affirm normative individualism, insist-

The remainder of this chapter is devoted to unpacking what ‘the full and free development of every individual’ implies in general terms. This will allow us to construct a list of suggestions for a socialist constitution. Precepts based on the ruling principle Marx articulates would not be subject to the criticisms Marx made of the constitutional principles of capitalist republics.¹¹ They would not be merely formal. They would not rest on appeals to what was supposedly ‘natural’ or ‘self-evident’. They would not be endorsed by sanctified customs. They would not be justified in terms of metaphysical commitments or transcendental reason. And these principles most emphatically would not be extrapolations from the social relations defining capitalist market society proclaimed legitimate on the basis of principles extracted from that very society.¹² No less than the ruling principle Marx refers to, other constitutional principles of socialism can be seen as expressions of the most important historical lessons of struggles against oppression. They thereby express the deepest commitments underlying the socialist project. Here too abstract content is not what ultimately matters, but the *actuality* of these commitments in institutions and social practices. The model of socialism developed in later chapters is an attempt to anticipate what such actuality might look like in broad terms.

ing every individual is of equal moral concern. Jürgen Habermas, for example, calls for an ‘egalitarian universalism’ based on ‘equal respect for the human worth of each individual’ (Habermas 2001, pp. 94, 103). This view is echoed by Martha Nussbaum: ‘If we agree that citizens are all worthy of concern and respect ... then we ought to conclude that policies should not treat people as agents or supporters of other people, whose mission in the world is to execute someone else’s plan of life. It should treat each of them as ends, as sources of agency and worth in their own right, with their own plans to make and their own lives to live, therefore as deserving of all necessary support for the equal opportunity to be such agents’ (Nussbaum 2001, p. 58). Like Marx, the vast majority of liberal egalitarians do not demand strict equality in distribution. Marx’s ruling principle is also not significantly different from Hegel’s insistence that the main lesson of world history is that *all* are free, not just one or a few. However much Marx may disagree with Hegel on what being truly ‘free’ involves, the ‘every’ in ‘every individual’ shows that for Marx too it extends to all. Of course, profound differences between Marx and liberal egalitarians and Hegel remain. The most important is that Marx has an adequate concept of capital and they do not.

11 See Hunter 2021.

12 Crucial constitutional principles in capitalist republics are extracted from capitalist market relations and then used to justify the capitalist market societies they were extracted from. ‘The sphere of circulation and commodity exchange ... is in fact a very Eden of the innate rights of man. It is the exclusive realm of Freedom [and] Equality ... Freedom, because both buyer and seller of a commodity ... are determined only by their own free will. They contract as free persons, who are equal before the law ... Equality, because each enters into relation with the other, as with a simple owner of commodities, and they exchange equivalent for equivalent’ (Marx 1976, p. 280).

Articulating the normative commitments of socialism is a collective project. No individual or group can claim to have a privileged position enabling them to proclaim the truth. Any attempt to articulate the most general lessons of historical struggles will be incomplete, provisional, revisable.¹³ The proposals for a socialist constitution that follow will require extensive supplementation. Some will surely require revision. Others may prove unacceptable. Nonetheless, the process of clarifying the essential lessons of the past, and the core commitments for a better future, only moves forward through making proposals, providing reasons in their defence, and remaining open to counter-proposals for which even stronger reasons can be given. The remainder of this chapter is a small contribution to that very large collective task.

For the purposes of the presentation, I shall at first consider ‘free development’ and ‘full development’ separately. But we must remember throughout there is no ‘free development’ that is not ‘full’, no ‘full development’ that is not free.

2 ‘Free Development’ (1): Self-Governance without Domination

2.1 *Some Initial Principles*

However much the laws of physics, chemistry, biology, psychology, and so on, play a causal role in social change, however strongly historical forces operate behind our backs in ways we cannot fully understand, anticipate, or negate, it is still the case that affirming a new constitutional order presupposes that we have the collective freedom to change how we organise our life together. The possible ways we might organise social life are certainly limited by the sort of animals we are, our natural environment, the material and cultural bequests of previous generations, and countless other factors. Nonetheless, it is in our collective power to ask whether the present way of organising society is acceptable, and whether there is a feasible alternative that would be better in significant respects. It is in our power to draw the practical conclusions from the answers. And it is in our power to exercise agency oriented by those practical conclusions.

13 Mészáros’ observation can never be forgotten: ‘(T)here is no historical precedence at all for embarking on the task which the agency of postcapitalist restructuring is called upon to face. Consequently, under the changed circumstances intellectuals ... know far less about ‘what is to be done’ in relation to the specific problems of postrevolutionary societies and their corresponding material mediatory forms of potential solution than the working classes whose daily bread is directly affected by the success or failure of the measures that need to be adopted’ (1995, p. 396).

It is appropriate, then, for a socialist constitution to begin with an explicit affirmation of the collective freedom of social individuals to transform their social world:

** We affirm our collective social freedom to establish a solidarity society.¹⁴*

This principle is obviously a version of the republican principle that freedom implies living under laws we have legislated ourselves, most forcefully expressed by Kant.¹⁵ In the republican tradition, however, the society supposedly established by the self-legislation of ‘we the people’ has taken various unacceptable forms, including an absolutist sovereign power (defended in Hobbes’s authoritarian republicanism), a system of merely formal rights to freedom and equality compatible with substantive inequalities and coercion (as in the classical liberal republicanism of Locke), and a republicanism granting social rights to the limited extent compatible with the property and production relations of a (gendered and racialised) capitalism (the civic republicanism of Hegel), and the republicanism of liberal democrats and social democrats that overlooks the impersonal domination of capital.¹⁶ What a ‘solidarity society’ means remains to be determined. But from the beginning a socialist constitution must stress the historical lesson that previous forms of republicanism are fatally flawed. The only adequate republicanism is republican socialism.¹⁷

When *we* affirm *our* freedom as concrete social agents to establish and maintain a solidarity society, we do not affirm an imaginary agreement among imaginary agents in an imaginary ‘natural’ state. Who is this ‘we’? The initial response is, ‘the people’. But historical struggles against oppression have taught again and again that ‘the people’ is an exceedingly problematic social construct.

On the domestic front those appealing to ‘the people’ in the constitutions of modern capitalist states originally took an extremely restricted and distorted view of who counts as part of the ‘we’ and who does not. Far more members of the society were originally excluded (women, slaves, workers ...) than included. When new constitutions or amendments have extended that scope formally, material and ideological structures of exclusion have remained in place. Struggles to extend the scope of those fully considered part of political community remain ongoing.

14 Statements in italics are the present author’s formulations.

15 Kant 1991.

16 See Westphal 2019.

17 See Roberts 2017; Platenkamp forthcoming.

It would be perfectly proper for to affirm in a socialist constitution the equal worth of groups that have at one time or another been excluded from full membership in the political community on arbitrary and unjust grounds – race, gender, sexual preference, religion, ethnicity, nationality, genetic character, political affiliation, and so on – so long as it is acknowledged that the list is open-ended and may need revision at a later date. It must also be stressed that affirming the equal value of all lives is not the same as universal tolerance. A commitment to solidarity with others does not imply solidarity with those who systematically contravene it. Those who claim to be members of a group with an inherent right to special privileges should not expect that supposed right to be acknowledged and respected.

Appeals to ‘we the people’ in capitalist republics have often been taken to imply that those outside a given political territory are to be supposed potential or actual enemies. Socialists have learned the historical lesson that dividing up the social world into a nativist ‘us’ and a foreign ‘other’ has regularly both reinforced oppressive social relations among ‘us’ and discouraged solidarity with those beyond our borders. This artificial limitation of the ‘we’ has fostered a disposition to prepare for and undertake military conflicts that could have been avoided. This disposition has been welcomed and reinforced by factions of capital profiting from arm sales or the use of military force to open up foreign markets and access to foreign resources. None of this is part of the socialist project.

The social freedom affirmed in the making of a socialist constitution is not the act of a people trapped within given political borders, anxious about the ‘other’ outside them. It is a free expression of universal solidarity among all social individuals who share core commitments, affirming the equal value of lives inside and outside constructed (and ultimately arbitrary) territorial boundaries. The solidarity defining socialism is inherently *internationalist*. This suggests a second principle for socialist constitution, affirming its universal scope:

** We affirm the collective social freedom to establish international socialism based on universal solidarity.*

An adequate model of socialism must incorporate institutions and practices of self-governance on an international level. This internationalist dimension of the socialist project is no more incompatible with a special concern for more limited (national, regional, local) communities than belonging to one of those communities is incompatible with special concern for family and friends. There are universally acceptable reasons justifying universal concern,

and there are universally acceptable reasons justifying special concern for particular relationships (impartial reasons justifying forms of partiality), based on the immense importance special bonds of love and obligation have in social life.¹⁸

2.2 *Organisational Forms of Self-Governance*

Establishing, renewing, and modifying a socialist constitution is a paradigmatic example of self-governance, of living under laws one has legislated for oneself. What does 'self-governance' mean here? The term was understood by classical liberal republicans in a manner that did not require an actual exercise of collective agency. For Kant, for example, it is enough that we rationally consent to what others have decreed, even when they did not act with our interests in mind.¹⁹ This is not the self-governance socialists affirm. A similar difficulty arises even when a constitution is composed and adopted by self-appointed representatives who sincerely wish to represent the society as a whole. This suggests a third constitutional precept:

** The socialist constitution is initially created, continually renewed, and periodically modified through the collective actions of the members of the socialist society, and not through mere subsequent consent to what others have done.*

This naturally raises the question of how this special sort of collective action might be organised. The next set of principles both addresses that particular issue and has great significance for the socialist project in general.

There are three main forms of democratic decision-making.²⁰ All warrant explicit endorsement in a socialist constitution:²¹

¹⁸ See Barry 1995.

¹⁹ Kant supposes that the enlightened monarch will endorse constitutions and institute constitutional reforms on the basis of self-interest, with unintended consequences that further the rational self-interest of his or her subjects (Kant 1991). The fact we have sufficient reason to rationally affirm the resulting constitution and its consequences is sufficient, Kant thinks, to justify saying that 'we' have made it.

²⁰ Landmore 2020.

²¹ I do not accept the view expressed in Popp-Madsen (forthcoming) and elsewhere that 'radical democracy' and 'socialist republicanism' are to be taken as distinct 'frameworks'. It is true that many advocates of 'radical democracy' fail to adequately take on board the critique of political economy and its implications. And it is true that many professed socialists have failed to adequately incorporate substantive democracy in their conceptions of socialism. But these failures should not be taken as the last word on how these

** The collective actions of the members that initially create, continually renew, and periodically modify the constitution of a socialist society are organised within three democratic social forms:*

- *Decision-making by elected representative bodies;*
- *Decision-making by representative bodies selected by sortition; and*
- *Direct decision-making by the members of the society collectively through referendums.*²²

We next must note the sharp contrast between decisions based on aggregating given preferences and decisions emerging after a period of discussion and deliberation, when initial preferences are modified in the course of exchanging ideas and perspectives with others. This distinction is relevant to each of these democratic forms.²³ Aggregating given preferences is incompatible with a solidarity society for a straightforward reason: it encourages social agents to neglect the effects furthering those preferences might have on other individuals, groups, the society as a whole, and the natural world we are part of. In a socialist society the ultimate aim of public deliberations must be to determine a course of action that it would not be unreasonable to ask others – and especially those most directly affected by the policy today and tomorrow – to accept.²⁴

terms should be used. The most defensible form of radical democracy is socialism; the most defensible form of socialism incorporates radically democratic institutions and practices.

- 22 Besides representative bodies whose members are elected and those whose members are selected by sortition, there is a third type of representative body important for self-governance: activist groups whose membership is determined by self-selection. Community Activist Groups play immensely important roles in republican socialism. But they are not decision-making bodies for the society as a whole.
- 23 Arguments for democratic decision-making based on aggregating given preferences clearly have a strong 'elective affinity' with defences of markets based on their supposed ability to aggregate the given preference orderings of individual economic agents. Markets, however, have even less claim to be 'democratic'. The preferences of those with vast purchasing power have great weight (one dollar, one vote; a million dollars, a million votes), while those of agents lacking monetary resources are granted no weight whatsoever.
- 24 Kant, Hegel, Rawls, Habermas, Barry, Nussbaum, and other prominent normative social theorists share the view that political evaluation of a political proposal must focus on whether it furthers the social good without imposing demands on others it would be unreasonable to expect them to accept. From a socialist standpoint, 'reasonableness' is an expression of solidarity; we should not impose demands on others that they have good reasons to reject. Marx expresses this view in his defence of the Paris Commune as a site of discussion and deliberation where claims of reasonableness and unreasonableness could

Understanding democracy as an aggregation of preferences should also be rejected on the grounds that preferences are not innate. They are developed within social institutions in the course of social interactions. It is a mistake, then, to uncritically take them as given. If the social context they were formed in was restricted in some way (and all social contexts are restricted in some way), they need to be critically examined. Aggregating unacceptable preferences is not a recipe for a good society. Accordingly, a society whose ruling purpose includes free development must affirm some version of the following principle:

** Democratic decision-making in socialist society occurs after a period of deliberation.*

- *When decisions are made by referendums, they occur after public deliberation open to all.*
- *When decisions are made within representative bodies, they occur after deliberation within those bodies, open to public scrutiny and assessment.*

Representative bodies need to be in a dynamic reciprocal relationship with the citizen body as a whole, each sharing relevant information with, and receiving relevant information from, the other.²⁵

The relevant goal here is that the perspectives and interests of those participating in democratic decision-making take into account the perspectives and interests of others affected by the decisions. In Hegelian jargon, the claim is that a universality incorporating particularity and singularity necessarily tends to emerge from democratic deliberations. In socialism, the good of the society as a whole tends to be furthered without unacceptable sacrifices being demanded of particular groups or individuals. This contrasts strongly with the abstract universality of capital, whose abstract imperative to accumulate abstract units of surplus value regularly requires unreasonable sacrifices of well-being.

Each of these forms of democratic organisation has strengths and weaknesses. Representative bodies elected with universal suffrage enable all citizens

be tested (Marx 1986a). Marx, of course, added that deliberations within representative bodies and by the public at large are severely restricted and distorted as long as the imperatives of capital (Commodify! Monetise! Valorise!) reign over the social world.

²⁵ It is worth noting here that the proposed socialist constitution does not include an absolute mandate for representatives to follow instructions given to them by those they represent prior to deliberations in representative bodies. Such a mandate would make those deliberations pointless and reduce decision-making to aggregating the mandates.

to participate in public life by holding those exercising authority accountable to those over whom the authority is exercised. But ordinary voters do not themselves exercise decision-making power in elected representative bodies. Further, those who are elected tend to have specific personality traits (facility in rhetoric, networking skills, charisma, personal ambitions, etc.) in tension with the democratic principle that no particular group ought to be systematically privileged by the institutional framework.

Random selection of membership in representative sortition bodies (sometimes referred to as ‘mini-publics’) provides an opportunity to participate in decision-making to all citizens. The realisation of this opportunity is, however, restricted to those who happen to be selected. The greater the number of decision-making groups selected by lot, the higher the odds of being selected to serve in one of them. Still, many if not most people may never serve on such a committee. In any given case only a few are granted decision-making power, calling into question the democratic legitimacy of their decisions. Legitimacy problems might also arise from the fact that by definition many, most, or even all the members of a randomly selected group are likely to not have special expertise in the specific policy matters of concern.

Referendums, finally, allow for universal participation in decision-making by all citizens, a positive feature from the standpoint of substantive democracy. But, again, many citizens may not be adequately informed about a given issue, and no one is likely to be adequately informed about all issues. A period of public deliberation would help address the former problem. But only to a degree, and the latter issue would remain. The problem of time constraints is inescapable. The more issues need to be deliberated, the greater the danger demands of direct democracy will overload the citizenry. Most people are likely to not choose to devote most of their waking life to policy matters, especially those that are complex, arcane, and removed from everyday concerns. Those who are willing to spend their lives in that way still have only so many hours in their day. Given the inexorable time constraints, even the most motivated person can only become extensively informed about a relatively limited range of political questions.

In the light of these considerations, the republican socialist model outlined in this work incorporates all three democratic forms of organisation. The goal is an institutional framework and set of social practices where the strengths of each compensate for the weaknesses of the others.

2.3 *Adopting and Modifying a Socialist Constitution*

As noted already, the scope of solidarity in socialism is inherently *international*, and so the scope of the socialist project – and of the socialist constitution – is

inherently international as well. While the substantive content of a socialist constitution is internationalist, that does not imply it comes into being only if it is adopted across the globe simultaneously. The relevant population the moment a socialist constitution is initially composed and adopted is contingent. But if it does not include a number of nations, or at least a number of significant regions within different nations, it seems best to say the prehistory of socialism has not yet concluded.

Suppose forces fighting to retain capitalism have been clearly defeated in a number of territories, and a vast majority of the population in the relevant areas wishes to institute a socialist society. As a first step two representative bodies could be established:

* A Provisional Democratic Assembly, whose members are elected to represent voters from territories of approximately equal population; and

* A Citizens' Constitutional Committee selected by lot, with its composition broadly reflecting the composition of the citizen body as a whole (gender, occupation, race, etc.).

Both bodies would have representatives from each area committed to the socialism. Then,

Members of the Provisional Democratic Assembly compose an initial draft of the socialist constitution and submit it to the consideration of the Citizens' Constitutional Committee. After deliberation the members of that Committee can either propose specific revisions and additions, or a complete alternative draft. If the Democratic Assembly accepts the revisions and additions (if any) or the alternative draft, the document is then discussed in an extensive series of in-person and virtual public forums open to all adults in the given territories, supplemented with extensive informal deliberations. The document is officially accepted if it is approved by sixty percent of voters in a subsequent referendum. If the Democratic Assembly does not agree with any changes proposed by the Citizens' Constitutional Committee, two distinct documents are submitted for public deliberations and decision prior to a vote.²⁶

26 I do not regard the 60 percent requirement as a core commitment of the socialist project. Some number seems required, and this one seems reasonable. Within an indeterminate range others would be reasonable too.

* If no proposed constitution receives the required votes for approval, the Democratic Assembly and the Citizens' Committee meet together and attempts to compose a revised document to submit to public deliberation and referendum, taking into account the reasons for the rejection of the initial submission. If they cannot come to a consensus regarding revisions, each would submit its own revision. If no proposal receives the threshold of votes in the second referendum, a new a Provisional Democratic Assembly must be elected and a new Citizens' Committee randomly selected, and the process begun from the start.

It is unlikely that the process of adopting a socialist constitution would be prolonged. Uniting a critical mass of the population capable of defeating pro-capitalist forces requires extensive political discussion and mutual learning over an extended period. Every step of the way the members of the various social groups struggling for socialism will be discussing alternative proposals for a socialist constitution in a variety of formal and informal settings. Many books like the present one will be written in the hope of contributing to these discussions. When the time comes to draw up a socialist constitution, the main issues and alternatives should be generally known, and the members of an Assembly and Citizens' Committee should have a general sense of what would be acceptable and unacceptable to those committed to socialism.

Since it is very likely that different regions and nations will join the socialist federation at different times, a principle like the following is needed:

* When forces struggling to retain capitalism are defeated in a country after the constitution for international socialism has been adopted, a Provisional Democratic Assembly and Citizens' Constitutional Committee can be established. Their members are charged with organising public deliberations in a series of public forums about adopting the constitution that has been established. If 60 percent of the adult population approve in a subsequent referendum, the constitution is adopted.

If the proposal fails, the Democratic Assembly and Citizens' Constitutional Committee must then propose an alternative constitution that those they represent might prefer. There are, however, good reasons to expect that this will be unlikely.

First, in the socialist constitution and model of socialism sketched in this work there are relatively few matters that are decided on the international level.

If the members of different nations wish to follow different policies, they have considerable scope to do so. Second, the few international-level constraints on their actions are less external impositions than implications of commitments that all socialists can be expected to share. Third, the collective learning process that is the foundation for the socialist constitution is radically open-ended. Like all human learning, it is fallible. And like all forms of human learning, it is capable of self-correction. A socialist constitution therefore needs to include rules for its modification:

** Every ten years a Democratic Assembly representing socialist polities will consider whether changes should be made to the socialist constitution. A Citizens' Committee devoted to this question will be randomly selected to reflect the composition of the members of those polities. If two-thirds of the membership of either group support an amendment, or if new members of the federation of socialist republics have recommended amendments, a public referendum will be held after a series of public forums. It will be adopted upon receiving sixty percent of votes of adult members of the federation.*

** Any activist group in the society can bring about a referendum to amend the constitution at any time by obtaining the signatures of twenty percent of the federation's adult population in support of it.*

If the members of a territory considering joining the international socialist community believe that the established constitution needs to be modified in some way or other, and if support for the modification in other areas meets the twenty percent requirement, the process that may modify the constitutions begins immediately. If the requirement is not met, the modification(s) will be considered at the end of the ten-year period, with those favouring them having time and opportunity to make their case.

The collective freedom to adopt, and modify a socialist constitution is an especially crucial form of the 'free development' Marx spoke of. The next set of proposals concern the general preconditions that must be in place for the 'free development of every individual' in all its forms.

2.4 *Rights Associated with Self-Governance*

** Every person in the relevant territories has the right to able to run for an elected position and be eligible for selection to a representative sortition body.*

** Every person in the relevant territory has the right to vote for elected offices and in the referendums.*

** All voting is by secret ballot.*

In addition, the socialist constitution explicitly acknowledges universal rights to:

** freedom of speech;*

** freedom of assembly.*

The constitutions of capitalist republics generally promise to protect rights to freedom of speech (including freedom of the press), and freedom of assembly (including freedom of religion). These rights have contributed to the reproduction of the property and production relations of capitalism. Free speech rights have allowed those enjoying concentrated economic power to influence public discourse in a perversely undemocratic fashion through private ownership of broadcast and electronic media of communications. The limitations and distortions of these rights in capitalism does not undermine their importance in socialism.

The rights in question cannot be dismissed as mere abstractions. They were formulated in the course of struggles against political privileges. Their importance was reinforced in the course of historical struggles against authoritarian capitalist regimes and the authoritarian tendencies of supposedly democratic capitalist states.²⁷ In the course of the 1840s Marx noted how the rising capitalist class was happy to abandon struggles for freedom of the press and freedom of assembly so long as monarchs and lords allowed them to pursue profits without undo interference. For Marx, struggling for these rights was not simply about overcoming the *ancien régime*'s restrictions on capitalist speech, associations, or the establishment of a specifically capitalist state. These struggles were important because they created a social space for critical analysis and collective political actions, important preconditions for workers' self-emancipation.²⁸

When the process of self-emancipation from capitalism becomes self-governance in socialism, these rights are no less important components of

²⁷ Marx 1987.

²⁸ See Shoikhedbrod 2019.

free development. Struggles against the dictates of unaccountable bureaucratic elites in Stalinist regimes taught the important lesson that these rights are not essentially tied to modern capitalism. If they were to lack material actuality in socialism any claim to 'self-governance' in socialism would be empty. They play a constitutive role in the reproduction of capitalism only because they are narrowly (perversely) interpreted and inconsistently applied.

Freedom of speech is necessary for open deliberation on matters of public import, from the initial adoption of a socialist constitution to the most everyday policy matters. It is a necessary precondition for deliberations where the viewpoint of each takes into account the perspective of others. Solidarity cannot be based on the presupposition that one already knows the perspectives and interests of others. Others must be able to speak for themselves, as struggles to make the voices of the subaltern heard in global capitalism show. The right to such speech is therefore essential to a solidarity society, and not an ideological obfuscation of liberal capitalism.

Freedom of assembly allows voluntary formal and informal associations of groups with shared perspectives and interests to come into existence and adopt whatever form of self-organisation they deem appropriate, so long as the associations do not contravene the full and free development of others. These associations may range from groups participating in deliberations regarding the socialist constitution, to activist groups concerned with some specific issue or other, to a neighbourhood league of local sports teams.

Free speech and freedom of association do not count for much if those speaking and associating are rendered inaudible and invisible in public life, or if the means of social communication are devoted to establishing a depoliticising 'society of the spectacle'.²⁹ We have learned from historical struggles against authoritarian regimes that there are great dangers when unaccountable elite decide what speech is allowed and what isn't, who is allowed media access and who is banished. It is then difficult for citizens to become adequately informed about issues of public import and to make knowledgeable judgements about alternative proposals for responding to those issues. Dominant views cannot be called into question and revised or rejected when they prove inadequate.

To prevent this from happening a socialist constitution includes the following commitment:

** The circulation of ideas in the public sphere of a socialist society must reflect socialist pluralism; all reasonable perspectives must have a reasonable opportunity to have their voices heard in the social world.*

29 Debord 2006.

The crucial term 'reasonable' excludes those who themselves attempt to exclude the voices of others by force or threats. And it excludes the distortions of public discourse occurring when private owners and their agents have the power to determine which ideas are allowed to circulate in society and which are not. 'Media for the people' could be implemented in a number of ways. For example, different positions could be allotted prime media space roughly proportional to the number of adherents. Or media access could be allocated randomly, or curated for a period by rotating activist groups. All should be pursued!

Exchanges of viewpoints on matters of public import in socialist media can be subject to standards of comradely speech and moderated in order to ensure those standards are maintained. Moderation can also help orient discussions to matters of the greatest import so that discussions of pressing public issues are not drowned out by endless digression on irrelevant matters.

How the various considerations are balanced out is more a matter of practical judgement than finding an infallible algorithm, with those making such judgements held accountable by democratic oversight. Having a wide variety of media outlets representing a wide variety of perspectives is surely one part of the answer. Monitoring by various democratic bodies is another.

In this context it is important to recall that the regular exclusion of voices and the construction of a 'society of the spectacle' are the norm in capitalism due to the imperatives of capital, the political agenda of media owners, and the desire of advertisers to maintain the attention of audiences while by-passing the cognitive parts of their brains. These forces systematically distorting public communication will be absent in socialism. That does not mean media politics in socialism will not involve complex and challenging issues. It does mean that a 'media for the people' will be possible for the first time in human history.

2.5 *The Essential Organisational Forms of Socialism*

The constitutional principles considered to this point affirm the constituting power of social individuals acting collectively. The constitution itself is adopted in an actual process of self-governance, and not a merely hypothetical (imaginary) process, or one in which people are asked to passively consent to the decrees of others. *Pace* Kant, even when there are good reasons to approve what unaccountable others have decreed, that should not be taken as living under laws one has made for oneself.

Besides the *constituting* power of social individuals in their social relationships and social practices there is the *constituted* power of the institutional framework devoted to matters of public concern. Traditional republican theorists have called for constitutional republics instituting a form of constituted

power in which social agents are 'at home', so to speak, recognising its principles as their own, affirming the institutions and social practices where these principles have material actuality. For reasons explored in Chapters 2 and 3, no form of capitalist republic can accomplish this adequately. If the organisational forms of collective freedom in republican socialism is to count as an advance in world history, they must do what cannot be done in capitalism.

In the proposal made above adopting a socialist constitution involves a Citizens' Committee selected by lot, a provisional elected Democratic Assembly, forums for public deliberation, and a public referendum. The same democratic forms are the central sites of deliberation and decision-making once socialism has been established.

** The ultimate sovereign power of an international socialist society lies in the collective ensemble of social individuals in their social interactions, mobilised within activist groups, representative bodies of socialist self-governance, public forums, and referendums.³⁰*

** Representative Democratic Assemblies and representative Community Associations can be delegated powers to make laws and determine public policies, subject to democratic oversight by the collective ensemble of social individuals in general and Community Activist Groups in particular.*

** All members of Representative Assemblies are elected for fixed terms and subject to recall.*

** The members of Community Associations are selected for fixed terms by lot to be broadly representative of the whole society.*

** All proceedings of Democratic Assemblies and Community Associations are open to the public; all documents introduced in the course of deliberations are publicly available.*

** Public comments on the deliberations of Democratic Assemblies and Community Associations, as well as on documents introduced in the deliber-*

³⁰ This formulation rules out both interpreting 'popular sovereignty' as the result of an aggregation of separately made individual decisions and the sort of us/them opposition that references to 'the people' have often been taken to imply.

ations of either, are posted on the electronic websites accessible to all. Summaries of the content of these comments conveying the full range of viewpoints and the relative weight of support for each are to be introduced and discussed during the deliberations of the representative bodies.

** If a Community Activist Group (or Groups) obtains signatures of twenty percent of the population calling for a referendum overturning a law or policy or establishing a new law or policy, a series of public forums on that proposal must be held, followed by a referendum. If 60 percent of voters in the referendum vote to overturn [approve] a law or policy, it is overturned [approved].³¹*

A goal of socialism is to incorporate the three organisational forms of democracy in a way that heightens the strengths of each while dampening their weaknesses. When this is successfully accomplished the constituted power of decision-making bodies will not appear as a transcendental power standing over and above the constituting power of social individuals in their social relationships. The specific details of the institutional framework and system of social practices accomplishing this task form the content of the model of socialism considered in later chapters. For now we can simply say that the full transparency of representative bodies, and the ability of citizens to have their views directly incorporated in the deliberations of those bodies, are required in addition to public forums and referendums.

In the world as we know it there are a variety of communities defined by place. Socialism too will have its social geography, and social agents will simultaneously belong to a variety of geographically based communities.³² This consideration suggests another principle:

** Democratic Assemblies, Community Associations, and other institutions of collective self-governance are to be established and maintained on local, regional, national, and international levels.*

31 These percentages are merely suggested; they could be increased or decreased within a certain range without affecting the substantive point.

32 In Chapter 9 we shall see that the socialist model also includes virtual communities within in electronic networks that are not defined in geographical terms. In another sense of the term, voluntary associations (churches, for example) are also particular communities extending beyond geographical borders.

Certain decisions affect particular communities much more than others. A decision between constructing a bridge here rather than there, or building a school there rather than here, affects people in those areas far more than those living on a different continent. The social freedom endorsed in a socialist constitution does not mean that everyone everywhere should have a right to participate in the making of every decision. The decisions that most profoundly affect a particular community should generally be made by representative bodies and public referendums in that community, and not by others only trivially affected. The inverse point equally holds; decisions that have non-trivial effects on a range of communities should not be made by the representative bodies or public of one or only some of them. The essential core of the socialist project therefore includes commitment to a principle of subsidiarity:

** The principle of subsidiarity affirms that those most affected by a decision should in general have the greatest weight in determining its content. This is a corollary of the principle that we are free only when we live under laws we have given ourselves.*

Granting this principle constitutional status is also justified on the basis of extensive historical experiences, including the excessive centralisation of most instances of so-called state socialism and the excessive fragmentation that resulted when Yugoslavian granted functional autonomy to different republics. One historical lesson is that if there is excessive centralisation of decisions, they tend to become more about the interests, beliefs, and powers of decision-makers than the interests, beliefs, and powers of those affected by the decisions. A second is that if there is too much decentralisation solidarity tends to be undermined by a politics of particularity seeking non-generalisable privileges while neglecting their 'external' effects. There are countless historical examples of how difficult it is to balance centralisation and decentralisation.³³ This difficulty will surely beset socialism as well. The model presented in the following chapters includes suggestions how the two elements might be combined in an acceptable fashion. Adjustments will continually have to be made based on learning processes stimulated by future historical challenges. Whatever adjustments may prove necessary in the model, however, the principle of subsidiarity must still be affirmed. If the effects of a law or policy decision can be reasonably foreseen to have the greatest impact on a specific community, the members of that community and their representatives must have special weight in the decision-making process.

33 Burbank and Cooper 2010.

2.6 *The Extended Scope of Self-Governance in Socialism*

In capitalist republics the principle that those exercising political authority are accountable to those over whom the authority is exercised is often asserted. Even the most democratic forms of capitalist states have not established anything close to that. They have been systematically limited and distorted by the inherent oligarchical nature of a system defined by vast concentrations of economic power and the impersonal domination of capital. The restricted scope of 'political' in these societies is an essential part of this story.

In capitalism, the only decisions categorised as 'political' are made by those occupying state offices. The production and appropriation of surplus value is treated as an essentially private matter, left to the contractual agreements of individual economic agents. *This is a profound category mistake.* The structural relationship between those who own and control a critical mass of investment capital and those who do not is an inherently political matter. The structural coercion in the labour market faced by those separated from the objective preconditions of human life is an inherently political matter. The social domination representatives of capital exert over subordinates in the labour process is an essentially political matter. The systematic physical and psychological harms inflicted on the workforce in the extraction of surplus value are inherently political matters.³⁴ The power to appropriate the social surplus and allocate its use is inherently a political matter. The gendered and racialised ways class relations are concretely lived are inherently a political matter, as are all the other ways those subject to coercion, domination, and exploitation are kept apart ('divide and conquer'). These supposedly private matters determine the general path taken by the polity no less than the laws and public policies adopted by state officials. The limitations of 'merely political emancipation' (rule by law, formally equal citizenship, and so on) in the illegitimately narrow sense of 'political' is, as Marx rightly insisted, one of the most important lessons of history.³⁵

In previous periods in world history the appropriation of social wealth by dominant classes (slave owners, feudal lords, tribute-extracting warrior aristocracies, and so on) was comprehended by all as an exercise of political power.

34 Holdren 2020.

35 Marx 1975a. Fishkin and Forbath (2022) provide a very comprehensive overview of how the political emancipation promised by some aspects of the US constitution has been limited, distorted, and reversed due to the power of economic oligopolies and their political supporters. They call for more political emancipation, specifically a resurgence of progressive movements for constitutional reforms. This agenda leaves in place the power that limits, distorts, and makes precarious what progressive movements are able to achieve. They fail, in other words, to learn the lesson their own book conclusively proves.

It is only in capitalism that political power becomes 'bifurcated' into the explicitly political power of those holding positions in the state apparatus, and the supposedly depoliticised 'private' power of those controlling a critical mass of capital.³⁶ Decisions regarding how much social investment there will be, what form it will take, and where and when it will occur, are not 'private' decisions that persons make for themselves when choosing the life that they, and no one else, will live. Decisions that determine who has access to means of subsistence from wages, and what they must do during the time spent in the wage labouring that typically will make up most of their adult waking life, are not like the decision to order broccoli or spinach at lunch, or to use a blue toothbrush instead of a yellow one. Nor are they similar to the much deeper decisions regarding the sort of person one wants to become. They shape the polity as a whole. The social forms of capitalism necessarily make these decisions appear as private matters between consenting adults. But the extraction of a social surplus from one class by another is never a private matter. It is always inherently political.

Class domination and the impersonal domination of capital are both incompatible with the republican principle of self-governance without domination. Even when full 'political emancipation' establishes the institutions and practices of formal democracy, the political community is not and cannot be a 'concrete universal' in Hegel's sense of the term, an 'I that is We and We that is I'.

The socialist project is a radically democratising project, dedicated to overcoming the 'bifurcation of the political' by extending scope of the principle of self-governance. A socialist constitution should explicitly affirm that *all* exercises of political power must be subjected to public control; *all* exercises of political authority must be subject to the consent of those over whom it is exercised. More specifically,

** The production and allocation of social wealth in general, and the social surplus in particular, are inherently political matters involving the exercise of public power. As such they fall within the scope of democratic decision-making.*

The next principle makes this general assertion more determinate:

36 The term 'bifurcation of the political' is taken from Rosenberg 1994. See also Wood 2002; Smith 2017a, Chapter 8.

** Workplaces are a form of political community. The republican principle of self-governance without domination extends to them no less than other political communities. Formally organised units of production and distribution in socialism are, accordingly, organised as self-governing Worker Collectives with autonomy over day-to-day operations.³⁷*

The specific organisational form of self-governance in Worker Collectives can be left open in a socialist constitution. In small collectives decision-making authority might always remain with the membership as a whole. In other cases that authority could be delegated to an elected Worker Council. Or the membership could directly elect a manager, or delegate to a Worker Council the right to appoint managers, or adopt some principle of rotation of managerial responsibilities.

The inherently political nature of workplace communities and decisions made within them raises the question of the appropriate form of property to characterise units of production and distribution. Insofar as the term ‘property’ suggests an external relationship between an owning subject and an owned thing, the question is misguided. The relationship between a community and the social organisations of self-governance is not external.³⁸ In the United States today the donor class may de facto ‘own’ politicians in a more than merely metaphorical sense. But de jure no one would deny that Congress and the White House are not things that can be appropriately privately owned by investors. In socialism, the point will be generalised and consistently applied. The state ownership that is an essential determination of ‘state socialism’ is also ruled out; republican socialism is a distinct alternative to that supposed form of socialism. We may speak of ‘social ownership’ if we wish. But it is better, I think, to consider organisations of collective self-governance as part of the ‘commons’:

** All social organisations of collective self-governance – including Democratic Assemblies, Community Associations, Public Forums, and Worker Collectives – are part of the Commons, and as such cannot be privately owned.*

It is worth emphasising that private ownership of a unit of production by its members is ruled out here no less than private ownership by outside investors.

37 Compelling defences of worker self-management are found in Wolff 2012, Schweickart 2002, Chapter 4.

38 Similarly, it is misleading to talk of ‘ownership’ of our bodies and its actions, as if they were external to us and not the substance of our embodied existence.

In the US members of Congress do not collectively own Congress, and the present occupant of the White House does not privately own the presidency. They have temporary use rights only. Socialism generalises and consistently applies this principle as well, extending it to all formal organisations of self-governance, including those concerned with social production for social needs.

The next suggested principle can be introduced through the same sort of generalisation and consistent application. In capitalist states the means of production used in public institutions (legislative offices, for example) are categorised as public property. In socialism the Worker Collectives engaged in production are explicitly acknowledged as organisations of collective self-governance. The means of production used in them accordingly are socially 'owned' or, better, part of the socialist commons. The members of those Worker Collectives no more have private ownership rights over them than anyone else does. The former, however, have use rights while non-members do not:

** Means of production are part of the extended Commons, and as such cannot be privately owned.*

These last claims are, of course, very contested.³⁹ In my view, the arguments presented in Chapters 2 and 3 are sufficient to establish that private ownership of units of production and the means of production within them depoliticises what is inherently political, privatises what is inherently social, and leads inexorably to serious social pathologies.

This section has been devoted to considering constitutional principles unpacking one important dimension of the 'free development of every individual', collective self-governance without domination. This freedom demands that every individual in the relevant area be able to run for office in a Democratic Assembly, vote in an election for an Assembly, be selected by lot to serve in a representative Community Association, effectively monitor the deliberations of those representative bodies, evaluate any documents introduced in the course of their deliberations, comment on the positions taken in those

39 They are denied by all liberal democratic republicans, both liberal democrats and social democrats. Many forms of social republicanism (that is, property-owning democracy and market socialism) allow privately owned equity in units of production, so long as it is widely dispersed according to their favoured egalitarian principles. Other forms of social republicanism call for private ownership of units of production by their workers.

deliberations, contribute to public forums, vote in referendums, participate in deliberations and decision-making within Worker Collectives, and so on.

It does not follow, however, that freedom is instantiated whenever individuals assert their own ideas and interests regardless of how (un) informed they might be of relevant matters, including especially the perspectives and concerns of others. Our development is 'free' in the relevant sense when our thinking and practice are informed by the relevant facts and take into account the likely implications of different options on others. Representative bodies and public forums are sites where the necessary learning processes can occur. But we cannot expect all participants to have the time or expertise to become adequately informed in the absence of social support. The model of socialism presented in subsequent chapters includes Sector Agencies, Producer Review Boards, Research Centres, Social Investment Centres, and a Judicial System. They are all organisations where (among other functions) those with specialised training and expertise generate and disseminate social knowledge contributing to self-governance. Socialist media obviously have a key role to play as well. In addition, a public agency whose members have specialised skills in collecting and processing qualitative and quantitative data is necessary to support informed deliberation within the institutions of socialist self-governance. This Agency for Technical Support is sufficiently important to warrant explicit mention in a socialist constitution.

** A society committed to free development must be committed to developing and dispersing knowledge of relevant matters of public concern, including the quantitative and qualitative data required for an informed comparative evaluation of different courses of action. A public agency whose members have the requisite skills for collecting, processing, and distributing such quantitative and qualitative data must be established as part of the institutions and social practices of self-governance without domination.*

The provide support services for these organisations. The need for specialisation and expertise in socialism must be acknowledged in socialism along with measures to prevent members of a technocracy from appropriating a form of unaccountable political power.

This completes for now the discussion of self-governance without domination. There is a second major dimension of the 'free development' at the heart of the socialist project, suggesting other constitutional principles.

3 'Free Development' (2): The Freedom of Particular Social Individuals

Besides affirming our collective freedom of self-governance, a socialist constitution must also affirm our freedom as particular social individuals. Just as the former incorporates numerous rights that were first historically formulated in the liberal tradition (freedom to hold office and vote, freedom of association, and so on), so does the latter. They include rights to:

** Bodily freedom, including freedom to emigrate, reproductive freedom, and so on;*

** Freedom from bodily harm and psychological abuse (and from the threat of harm and abuse);*

** Freedom to own and use personal property;*

** Freedom from arbitrary search and seizure of personal property;*

** Freedom from arbitrary arrest;*

** Right to due process in a judicial system upholding the constitutional principles of socialism;⁴⁰*

** Freedom of occupation; and*

** Freedom of conscience (including both freedom of religion and the freedom to not be religious).⁴¹*

40 Little will be said about the judicial system in this work. One reason is that the topic is vast. On the one hand, a socialist society cannot allow social agents to benefit from transgressing fundamental requirements; on the other, the police-incarceral system of contemporary capitalism must be dismantled. It would require a separate book to explore an alternative that would accomplish both objectives. Another reason is that a strong system of judicial constitutional review like that in the US and other capitalist states has no place in republican socialism. A strong system of judicial review necessarily tends to undermine democratic self-governance. And while there have been exceptions historically judicial review has tended to hamper, rather than support, emancipatory social movements, as Bellamy (2007) and others have argued. If judicial review should be limited in so-called democratic capitalist states, this is even more the case in societies instituting the robust forms of democratic organisation and practices of republican socialism.

41 Freedom of conscience is also implied by freedom of association required for self-governance without domination.

Social relations in capitalist societies have been systematically racialised and gendered. Moving to socialism will not eradicate all forms of oppression instantly and totally. A socialism for the twenty first century must include measures that will put out of play any persisting legacy of racism, sexism, and other forms of systematic oppression, as well as safeguards to prevent such oppressive practices from re-emerging. A clear expression of the commitment to that goal belongs in a socialist constitution:

** Socialism is committed to freedom from all forms of systematic discrimination.*

This 'liberal' right has not been (and cannot be) adequately actualised in a capitalist regime, where 'divide and conquer' is a strategy representatives of capital will employ to maintain their social dominance. The following principle also expresses a commitment to fulfil an unmet liberal promise:

** The socialist project includes the freedom to live the particular sort of life one has chosen to live, consistent with solidarity with others.*

This 'right of particularity' (to use Hegel's term) includes a number of different dimensions: the freedom to formulate an implicit or explicit particular conception of the good life; the freedom to formulate a particular life plan expressing that conception; the freedom to determine the particular activities for actualising that life plan in the given circumstances, the freedom to judge for oneself the goods and services most useful in these activities, and so forth.

Marx's (in)famous vision of a future society where we hunt in the morning, fish in the afternoon, and become a critic at night is not best understood as an expectation that in socialism every individual will flit from one activity to another at their whim.⁴² It does point to the way a free society does not impose fixed social roles by custom, authoritarian decree, or lack of acceptable options. In socialism social identity will be fluid and experimental. Individuals will have the space to discover particular interests and freely associate with those sharing them, developing new capacities in the process. If the good of socialist society as a whole includes 'the free development of every individual', it must include the freedom to develop and actualise particular conceptions of the good, based on each individual's sense of what matters to them as the particular individuals they are.

42 Marx and Engels 1976a, p. 47. See Smith 2018b for a critique of this mistaken reading.

Freedom of occupation is an obvious implication of the above line of thought. Freedom of choice with respect to means of consumption is another. The same right to freedom of speech that is a necessary component of collective self-governance comes into play here as well. It not only allows us to express who we are and what we want to do, it also opens us to evaluations and suggestions from others, as well as feedback on how our actions and plans might affect theirs. Here as elsewhere, freedom of association in socialism is not a matter of doing whatever we want, whenever we want, however ill-informed of relevant matters we might be. The universal right to freedom of speech is crucial to becoming reasonably informed about matters relevant to the particular choices we make in the course of our lives and how these choices affect others. We are then better able to revise, refine, and redefine our sense of self, our goals, and our life plans. Similarly, freedom of association is not only a necessary precondition for collective self-governance. It is also a necessary condition of the possibility for particular social individuals to flourish as particular *social* individuals, sharing with others their concerns and projects.

Socialism is a solidarity society. Solidarity with others must be maintained even as particularity is affirmed. The right to particularity, in other words, is not an absolute. Freedom of occupation, for instance, does not mean that we are guaranteed any position that we might want to have. Neither do we automatically get to consume a good simply because we wish to. In socialism there is no freedom to pursue a life plan imposing serious environmental harms on others. There will be space for individuals to experiment with different life choices on a much wider scale than in any variant of capitalism, but those choices must be consistent with a solidarity society. They cannot undermine collective self-governance without domination, and they cannot undermine the freedom of others to choose to live the particular sorts of life *they* have chosen to live (supposing that their choices are suitable in a solidarity society). It would be misleading to say that the demands of solidarity trump individual rights in socialism. The more accurate assertion is that the content of individual rights in socialism includes the solidarity principle from the start.⁴³

43 Freedom in socialism does not extend to choices to engage in exploitative and oppressive practices against others. Any form of 'freedom' imposing demands on others it is unreasonable to expect them to accept – any form of freedom inconsistent with the full and free development of others – is unacceptable. The 'freedom' to own slaves, for instance, is a 'freedom' that denies the freedom of others, an incoherent social practice based on force and ideology. The same holds for any 'freedom' to exploit and oppress. If the history of capitalism has taught us anything, it is that rest of us need protection from sociopaths and malignant narcissists. A solidarity society, where actions incompatible with solidar-

The above suggestions for a socialist constitution affirming the ‘free development of every individual’ are not intended to be the last word on the topic. A socialist constitution is an expression of an ongoing collective learning process about what universal human emancipation requires. Any anticipatory discussion must be open-ended as well.

It is also worth repeating that the ruling principle for a republican socialist society is the ‘full and free development’ of every individual, not ‘full development’ and ‘free development’ taken separately. That said, matters especially pertinent to full development will be considered next.

4 ‘Full Development’: Universal and Particular Needs

A socialist constitution must affirm that the purpose of a socialist society includes the full development of the essential capacities of social individuals to the greatest feasible extent in the given historical conditions:⁴⁴

** A socialist society is committed to providing each individual with opportunities to exercise their essential capacities to the greatest feasible extent in the given historical conditions.*

It would be appropriate to include a provisional list of capabilities in a socialist constitution, so long as its provisional character is explicitly noted:

Any list of essential capabilities must be provisional, subject to revision as our understanding advances. Present understanding enables us to affirm as essential to human well-being the capacities to:

- *Live healthy lives of normal length;*
- *Exercise agency in creative ways;*
- *Engage in sensation, imagination, theoretical and practical thought;*

ity are systematically discouraged and thwarted, offers that protection, whereas capitalism systematically selects for sociopaths and narcissists (Marks 2016).

44 It is, of course, literally impossible for every individual to fully develop every potential latent in the human species in a single lifetime. It is even impossible to develop every capability that potentially could be developed by a particular individual in the course of their lifetime. Nor is it plausible that a society whose purpose is the ‘full development’ of its members fulfils that purpose by imposing a uniform conception of human development on everyone. (That would be incompatible with *free* development, even if there weren’t strong reasons to reject the view that ‘full development’ is the same for everyone.) It follows that a socialist constitution refers only to essential capabilities.

- *Have appropriate emotional connections with other social beings;*
- *Experience ourselves as part of the natural world in relationship with other parts;*
- *Engage in play;*
- *Cooperate with others in households, workplaces and other organisations and associations; and*
- *Participate as an equal in the social practices of self-governance without domination.*⁴⁵

Capacities mean little in the absence of opportunities to develop and exercise them. The development and exercise of the essential capabilities of *social* individuals is inherently a social matter. All are developed and exercised within social interactions, both within formal organisations and in the informal settings of everyday life.

Developing and exercising essential capabilities require resources produced by the social labour of others within a social system of production and distribution.⁴⁶ This makes the following principle as important as the principle of self-governance without domination:

** The purpose of production in socialist societies is to address democratically determined social needs by providing goods and services aiding the development and exercise of human capabilities.*

Some specific ways salient social needs can be democratically determined are introduced in the following chapters. In a constitution, social needs are considered more abstractly. Three general categories of social needs will be distinguished here. Addressing each effectively is part of the essential core of the socialist project.⁴⁷

45 This list is adapted from Nussbaum 2001, pp. 416–18.

46 The debate between ‘resourcists’ for whom justice has to do with the distribution of resources (Rawls, Pogge) and capability theorists (Sen, Nussbaum) is more than a little bogus, in my view. Capabilities, resources, and activities are all necessary components of ‘full development’. Access to resources does not matter unless they are associated with developing and exercising our capabilities; capabilities cannot be developed and exercised without resources. Insisting that the lack of resources is unacceptable from a normative point of view is not to be guilty of a form of fetishism (Pogge 2010).

47 No rigid distinction between ‘needs’ and ‘wants’ will be made in this work. (Does it make any sense to say that a world-class musician merely ‘wants’ an instrument rather than ‘needs’ it? Isn’t it the case that a painter *needs* to have a brush?)

4.1 *Universal₁ Needs*

This first category of needs encompasses the general social needs of a geographical community or, equivalently, the needs social individuals generally have qua members of such a community. The ‘full development’ of every individual requires that social production be effectively directed to providing the resources required to address these needs.⁴⁸ A socialist constitution should therefore include a general statement along the following lines:

** A socialist society must effectively address the universal₁ needs that all members of a political community have qua members of that community.*

The goods and services that address *universal₁ needs* will be referred to as *universal₁ goods and services*. Two examples are fairly self-explanatory:

** There is a collective universal need in every political community for the resources required to establish and maintain the essential institutions and organisations of collective self-governance.*

A Democratic Assembly or Research Centre, for example, obviously cannot accomplish its tasks if it lacks the required resources.

** There is a collective universal₁ need in every political community for a built social environment conducive to the full development of social individuals.*

Infrastructure goods (including roads, bridges, harbours, airports, energy networks, communication networks, and so on) are obvious examples of *universal₁ goods*. The system of public schools, public housing, public hospitals, playgrounds, hiking trails and other to public recreational facilities, cultural venues such as museums, theatres, concert halls, and outdoor amphitheatres, fall under this heading as well. In a solidarity society it is important that they are all available to every individual, even if only a relatively small subset of the community uses them at any given time and some do not ever use many of them.

The next *universal₁* need to mention is a second-order need; the need for what enables us to address first-order needs more effectively:

48 See Gough 2020.

** There is a collective universal need in every political community for an effective innovation system furthering human flourishing.*

In the period of capital's reign, ways of life have been destroyed, replaced by new ways of life that vanished in their turn, according to the dictates of capital accumulation and the policies of political elites responding to (and thereby helping to shape) those dictates. This dynamism has come at immense cost to social stability, human flourishing, and environmental damage, with most of those harmed having little or no say in the process. The social pathologies and environmental harms from changes driven by the drive to accumulate as much capital as possible as fast as possible prove conclusively that change is not a social good in itself. The socialist project incorporates this historical lesson. Another lesson, however, remains valid: social life is radically open-ended. Social life is not eternally fixed by divine decree, biology, or custom. The full (and free) development of each individual is not a static condition attained once and for all. It is an ongoing process. A collective need for innovations promising to further that process can be affirmed in a socialist constitution.

Finally,

** There is a collective universal₁ need in every political community for a natural environment within which human beings can flourish.*

Infrastructures and networks in capitalism have regularly undermined the development of individuals by inflicting significant environmental harms on their communities. This must cease. Building energy infrastructures and transportation networks that do not involve massive emissions of greenhouse gases is one obvious example of what this principle requires.⁴⁹

4.2 *Universal₂ Needs*

The resources addressing this second category of social need are first and foremost needed by individuals as embodied individuals distinct from other indi-

49 The provision of 'means of production' can also be categorised as a universal₁ need that all social individuals have as members of a community. It is also the case that particular units of production have particular needs for particular means of production, and that in the model of socialism developed below members of these units play a role in the determination of needs for means of production that sets it apart from the determination of other universal₁ needs. These considerations justify treating the need for means of production at a different place in the exposition of the model.

viduals, each with their equal claim to worth. We share the need for institutions of self-governing without domination, infrastructure, innovative dynamism, and a liveable environment. But my need for food is distinct from your need for food, and your need for education distinct from my need. We may have the needs in common, but my eating and being clothed does not provide you with nutrition or dress. The provision of *universal₂ needs* addressed by *universal₂ goods and services* is therefore a distinct part of the socialist project.

** A socialist society must effectively address the universal₂ ('basic') needs that all social individuals have as individuals for the necessary means for standing as an equal in social life in the given historical context.*

More specifically,

** The full development of social individuals requires adequate levels of food, shelter, clothing, physical and mental health treatment when required, education, aesthetic experiences, and care (especially in conditions of dependency experienced by the very young, the elderly, the infirm, and so on).*

The need for these goods is as universal as the need for universal₁ goods.⁵⁰ The continued failure of capitalism to satisfactorily address profoundly important universal₂ needs for all members despite centuries of scientific-technical advances and productivity gains is a truly damning indictment.

When considering this category of needs it is especially important to remember that advances in our understanding of human flourishing, and advances in productive capacity and in the range of products that can be produced, will likely expand our conception of what counts as 'basic' needs over time.

The term 'effectively' in the phrase 'must effectively address' is very vague. It is meant to convey that a socialist society is committed to more than merely providing a minimum sufficient to maintain biological existence, and more than just enough to leave members of the least advantaged better off than they might otherwise be. The requirement is stronger: the institutions and social practices defining a socialist society must enable every social individual to have access to the universal₂ goods and services required to 'stand as an equal' in

⁵⁰ A reminder: in this work 'goods' will often be taken in a broad sense including services.

social life.⁵¹ Anything weaker is inconsistent with the equal worth of each individual that Marx acknowledged and that emancipatory social movements have struggled to actualise.

The intrinsic connection of 'full development' and 'free development' is especially clear when we consider universal₂ needs. As Marx insisted, when individuals are cut off from objective material preconditions of human life – specifically, means of subsistence and the means of production required to produce them – they are subject to a form of structural coercion, forced by their objective situation to put their labour power at the disposal of those with money capital. The constitutional right to universal₂ goods, combined with a system of production for social needs, removes this social coercion, opening a space for free development no less than it contributes to full development.

The universal₂ need for education warrants special emphasis, given its profound and direct contribution to the socialist project. A socialist society must provide each of its members with opportunities to acquire extensive general background knowledge about the world and substantial information regarding topics of special import to them. No less important are opportunities to develop capacities to learn what they have not yet learned, and to apply general and particular knowledge in general and specialised settings. A socialist education system must further prioritise developing the capacity to make critical evidence-based assessments of competing policies and to understand the likely consequences of adopting one or the other. Here too full development and free development are intertwined. Freedom is not simply a matter of making choices without external interference, as Hobbes asserted. When called upon, we must be able to explain our reasons for acting in one way rather than another to ourselves and others if we are to affirm those actions as 'ours' in the sense that matters. Only then can we assert they were our free actions. Learning how to learn and how to engage in critical reasoning are necessary preconditions for making good decisions regarding our own particular lives and for contributing effectively to collective processes of social self-determination.

The required capacities can be developed in the course of a broad education supplemented by specialised studies and training in fields of special interest. Access to continuing education throughout a lifetime is needed as well. The constitutional commitment to effectively address universal₂ needs includes a commitment to provide the universal education for social individuals that is both a necessary element of individuals' full development and a background condition for their substantive self-determination. Extensive education also

51 See Anderson 1999.

provides a necessary precondition for fulfilling the commitment to innovative dynamism that is a core component of the socialist project.

4.3 *Particular Needs*

There is a reasonably clear distinction between the universal needs all members of a political community share (whether as members of a collective social body or as distinct embodied individuals), on the one hand, and the particular needs for particular goods and services particular individuals and groups of individuals require in order to live the particular ways of life they have freely chosen to live, based on their particular conceptions of the good and the good life. Just as 'free development' includes being able to choose to live a particular sort of life, 'full development' includes having access to the particular goods that help us live these particular sorts of lives. It is not possible to undertake particular pursuits successfully without the necessary material preconditions. (Those who wish to develop their musical talents, for example, require instruments.) While there is not a universal need for particular goods, there is a general claim to be made: granting space for different individuals and groups to affirm different conceptions of the good life would not have substantive actuality without access to the particular preconditions for successfully living the particular sorts of life they have chosen to live. A statement to this effect has a place in a socialist constitution:

** The socialist project includes a strong commitment to provide each individual with the particular goods they require for their particular life plans to the greatest feasible extent compatible with the principle of solidarity (that is, without imposing unreasonable demands on others).*

The 'right of particularity' is as essentially tied to free development as to full development. Free development includes the freedom to develop and express particular conceptions of the good life, to judge for oneself how best to go about living a particular conception, deciding what sorts of goods and services and voluntary associations can best help us live the sorts of lives we have chosen to live. The social and material preconditions of the full development of our essential capabilities are the social and material precondition of our free development.

Addressing particular needs relevant to a plurality of conceptions of the good and life plans furthers the same commitment to *socialist pluralism* underlying rights to freedom of speech and freedom of association. Some individuals and associations of individuals will have different interests, different goals, different styles of life than others. Some will immensely enjoy activities others

strongly dislike. Special attachments and commitments to family, friends, particular groups, religions communities, and so on, will not extend to all. Such particularity is not opposed to the universal principles of a socialist constitution. The 'right of particularity' is itself a universal principle.

The right of particularity is also stressed in the liberal tradition of political theory, which proclaims that individuals must be free to adopt and pursue their own particular conceptions of the good life (subject to the constraint of not infringing on the legitimate rights of others). On the level of abstract ideals, liberalism is closer to the socialism project endorsed in this book than positions that attempt to impose a uniform conception of the good on a citizenry, as in Christian nationalism and other forms of theodicy. Nonetheless, there is a fundamental flaw: in the liberal view the relationship between human conceptions of the good and the good of capital is invisible.

The good of capital is merely formal, measured by the quantitative difference between M' and M . The empty form requires a content. The pursuit of an indeterminately wide range of particular conceptions of the good life provides the content. More specifically, it provides subjective motives for the agents participating in capitalist production and exchange, that is, the purposes for using the money they are able to attain from that participation. The liberal tradition comprehends and appreciates the historically unprecedented openness to particular conceptions of the good in modern capitalist societies. But it fails to comprehend how this indeterminately wide range is nonetheless constricted. The capital form may be empty of content in itself, but it has the power to select for content, selecting for particular conceptions of the good life that are consistent with its (inhuman) good, valorisation, while selecting against pursuits that do not contribute to that end.⁵² Being able to pursue particular conceptions of the good and freely associate with others who share that conception is an important dimension of the full (and free) development of individual. A core commitment of the socialist project is to enable such pursuits beyond what is possible in liberal capitalism, where the scope of human activities is systematically stifled by capital's abstract universal valorisation imperative.

This does not mean that any particular conception of the good can be affirmed and lived out in socialism. In a solidarity society, particular needs that impose unreasonable demands on others or on the world we share cannot be affirmed. Perhaps there will come a day when 'fully automated luxury com-

52 In more technical terms, capital selects out of an indeterminate range of heterogeneous pursuits those that directly or indirectly contribute to the homogenised (abstract) activity of producing a homogenous (abstract) property (value), represented in a homogeneous (abstract) thing, money. See Murray 2000.

munism' ensures that any particular need can be addressed without imposing significant harm on others or the environment.⁵³ That day has not yet come. In the meantime, there is a need for a general framework determining how access to the goods and services addressing particular needs can be produced and distributed in a way that tends to actualise the full (and free) development of each individual to the greatest feasible extent. The model of socialism presented in the following chapters proposes such a framework.

Should ruling out unreasonable demands for particular goods be considered a constraint on individuals and associations? Constitutional principles are not mere suggestions. They express the 'hard core' of the socialist project. To allow them to be infringed is to abandon that project. In this sense the constitutional principles discussed in this chapter are all 'constraints' that must be complied with. On the other hand, the term 'constraint' generally refers to an impediment imposed by an external force. For those committed to the socialist project complying with the demands of solidarity is not an externally imposed impediment. In a much more straightforward and important sense, the constitutional principles of socialism are enabling conditions for 'the full and free development of every individual'.

The two principles to be considered in the next section are also positive enabling conditions for the full and free development of all. Nonetheless, I shall refer to them as 'solidarity constraints' to give special emphasis to the way they rule out practices and states of affairs characteristic of capitalist market societies.

5 Two Solidarity Constraints

'Free development' has been interpreted above as collective self-governance without domination and being able to choose the particular sort of life one wishes to live. 'Full development' has been understood as the development and exercise of our essential and particular capacities and the corresponding need for the goods and services required for that development and exercise. The distinction is artificial, adopted here for ease of exposition. Free development and full development are each essential for the other. The distinction will now be put aside.

53 Bastani 2020.

5.1 *The Investment Constraint*

As we have noted above, there is a systematic tendency in the capitalist world market to generate virtuous circles where those living in already advantaged places are able to reproduce and extend their advantages, and corresponding vicious circles where persons living in disadvantaged areas tend to have their disadvantages reproduced over time. Insofar as severe inequalities are systematically reproduced across the globe, international solidarity cannot be adequately institutionalised, and insofar severe inequalities are systematically reproduced within a national territory, solidarity cannot be adequately institutionalised domestically.

The socialist project includes eradicating the systematic tendency to geographical disparities that makes the development of individuals in some places much less full and much less substantively free than in others. No constitutional principle can guarantee the full and free development of every individual in every specific case. Far too many biological and social contingencies are in play. But it is possible to eliminate systematic tendencies for normatively significant disparities to arise and be reproduced over time on the basis of social geography.

** No individual's development should be systematically hampered by the contingent fact of living in one place rather than another. Serious disparities in life chances must not result from geographical disparities in flows of investment.*⁵⁴

This requires a constraint on flows of investment.

In David Schweickart's model of Economic Democracy, every political territory in socialism receives funds for new investments – investments devoted to starting new units of production or expanding the productive capacity of those already existing – in direct proportion to its population size.⁵⁵ The proposal here goes a step further, extending the principle to *all* investments:

** Every specific political territory in socialism (local, regional, and national) receives a share of social investment funds directly proportional to the size of its population.*

54 This reference to flows of investment raises important questions regarding the role of 'money' (better, 'quasi-money') in socialism. See Chapter 7 below.

55 Schweickart 2011, pp. 51–8.

5.2 *The Environmental Constraint*

Historical experience in capitalism teaches that if we wish the earth to remain within planetary boundaries conducive to human flourishing, there must be limits to the environmental footprint of human activities. The resources depleted and the wastes generated in the social world must be limited.⁵⁶ It is important to ensure as well that environmental concerns do not systematically disadvantage the full and free development of some simply because they happen to live in one place or time rather than another. Elementary solidarity requires recognition that no one person, group, nation, or generation has any more intrinsic right to impose an environmental footprint greater than any other person, group, nation, or generation.⁵⁷ This suggests a second ‘solidarity constraint’ parallel to the investment constraint:

** Every political territory is allowed a share of the aggregate allowable environmental footprint directly proportional to the size of its population.*

‘Allowable’ here is defined in terms of the planetary boundaries compatible with human flourishing, as determined by the best available environmental science.⁵⁸ This principle rules out the environmental racism so prevalent in capitalism, where the greatest costs from depleting resources and generating wastes generally tend to be inflicted on the most vulnerable communities.⁵⁹

56 See Antonio and Clark 2020; Foster and Clark 2020; Stoner 2014.

57 ‘From the standpoint of a higher socio-economic formation, the private property of particular individuals in the earth will appear just as absurd as the private property of one man in other men. Even an entire society, a nation or all simultaneously existing societies taken together are not owners of the earth, they are simply its possessors, its beneficiaries, and have to bequeath it in an improved state to succeeding generations’ (Marx 1981, p. 91).

58 See Wackernagel and Beyers 2019 and the work of the Global Footprint Network (<https://www.footprintnetwork.org/>). Can there be a sustainable environmental footprint with respect to natural resources that are not naturally replenished? In a strict sense the answer must be no, since *any* use of those resources will by definition be unsustainable if it continues long enough. In a looser sense, however, using such a resource can be consistent with the second solidarity constraint if use is restricted to essential matters from the standpoint of social needs, if the search for an acceptable substitute is made a priority of the innovation system, and if we have good reasons to expect this search to be successful.

59 Harvey 1996; Jorgenson 2003. The second solidarity constraint also explicitly and emphatically rules out a ‘Promethean’ socialism dedicated to the domination of nature. The ruling principle of republican socialism is the full and free development of every individual, including members of generations yet to come. It is not the unconstrained development of productive forces regardless of environmental consequences. See Saito 2022, as well as the passage from Marx in footnote 57 above.

In capitalism, happiness from ever-expanding material consumption is the *de facto* preeminent conception of the human good. It is not the case that we must give up our happiness to avoid imposing potentially catastrophic environmental harms. Capitalism's promise of increasing happiness from endlessly increasing consumption is ceaselessly deferred. Rather than a realisable form of human good, consumerism is in fact a dimension of capital's good (valorisation through increased sales). Socialism offers an 'alternative hedonism', a deeper and more sustaining human happiness.⁶⁰ (I shall return to this point in the discussion of the politics of time at the end of the chapter.)

The cumulative impact of economic disparities and environmental racism in the capitalist epoch justify a transition period when systematically disadvantaged communities receive more funds for investment and a greater share of the aggregate environmental footprint than their population size would otherwise determine, as well as the inverse allocation of a smaller share of both to the most advantaged regions. I shall not attempt here to determine how extensive reparations should be, or how long they should last; answers will depend on the specifics of specific cases. The goal of the present study is to consider the institutional framework and social practices that would not generate unjustified disparities as socialism moves forward.

6 Further Principles

All social actions build upon the common collective heritage of natural evolution and socio-cultural evolution. Language, art, mathematics, scientific-technological knowledge, developed over the course of many millennia, are some obvious examples. No distinctively human achievement would be possible were it not for the contributions of those who came before; we are historical social beings.

60 The term 'alternative hedonism' is taken from Sober 2020. Those who have internalised alternative hedonism will not experience the 'solidarity constraints' as constraints; they will be seen instead as enabling conditions for the form of social life they affirm. I have retained the term nonetheless on the grounds that those within a republican socialist society *must* comply with them, whatever their subjective dispositions. The term is especially appropriate in the second case, since it explicitly and emphatically rules out a 'Promethean' socialism dedicated to the domination of nature. The ruling principle of republican socialism is the full and free development of every individual, including members of generations yet to come. It is not the unconstrained development of productive forces. See Saito 2022.

Acknowledging this fact about ourselves does not at all imply that our own efforts are meaningless or that we do not have responsibility for what we do. But it does imply that it is impossible in principle to determine how much of our accomplishments is due to our own efforts and how much is owed to our shared cultural inheritance.⁶¹ We can say that over time the latter will grow relative to the former. As Newton famously remarked, if he saw further, it was only because he stood on the shoulders of giants. The shoulders of those of those Newton would not have considered giants were necessary too. The point holds for aesthetic achievements as well as for science. While Bach's Cantatas stand among the greatest artistic achievements of our species, they could not have come into being without the centuries of Lutheran hymns Bach appropriated. Not a single plot in Shakespeare is original. The point is worth stressing again: *all* human achievements build on the achievements of those who came before us.

No one has any special claim to this common heritage. In capitalism, however, a relative few are able to appropriate a wildly disproportionate share of its benefits thanks to the coercive power of the state to grant and enforce intellectual property rights in knowledge goods.⁶² As mentioned in the previous chapter, this has resulted in a level of economic power and wealth inequality incompatible with the republican principle that all stand as equals in social life. This enclosure of the 'knowledge commons' also obviously limits the freedom to use our shared cultural inheritance, and it limits the full development of those denied access. The following principle rules out this enclosure:

** There is a universal freedom in socialism to appropriate and benefit from our collective cultural heritage, a freedom necessary for full development.*

There are private property rights to universal₂ and particular goods in the model of socialism presented in later chapters; my toothbrush is *my* toothbrush. But there are no private property rights to social knowledge.

Is there a tension between the affirmation of a knowledge commons freed from the enclosures of intellectual property and the previous affirmation of the need for innovative dynamism? For the moment I shall simply assert there is not. We will have to return to this important question later, after the main features of the model have been presented.⁶³

61 Alperovitz and Daly 2008.

62 Mazzucato 2013.

63 See especially Chapter 10, Section 1 and Chapter 11, Section 4 below.

The final principles for a socialist constitution considered in this chapter concern Marx's distinction between the realm of necessity and a realm of freedom. For our purposes we can define the former in terms of the labour that must be performed for the successful reproduction of a society with its defining institutional framework and systems of social practices. In an aristocratic society, for example, the realm of necessity is defined by the social labour required to reproduce an aristocracy as a dominant class over peasants, serfs, or slaves. In socialism the realm of necessity is determined by the socially necessary labour required to maintain collective self-governance and the level of social production for social needs required for the material reproduction of the society.

Given that for the foreseeable future the members of a socialist society will have to spend a significant portion of their lives engaged in socially necessary labour, a socialist constitution must affirm the following statements:

** Every individual has a right to contribute socially necessary labour in some form or other, and to receive appropriate social acknowledgement for that contribution.*

** Every individual able to do so has a duty to contribute socially necessary labour in some form or other.*

'In some form or other' implies there are a variety of forms socially necessary labour can take. One such form is labour within formal organisations, such Worker Collectives engaged in production and distribution, or within other institutions of socialist self-governance (for instance, Democratic Assemblies). There are other forms as well, justifying the next principle:

** The care labour undertaken informally in households or communities necessary for social reproduction must be acknowledged as the socially necessary labour that it is.*

This is in contrast to capitalism, where only labour undertaken for a wage and directly related to the production of commodities with monetary value is in practice acknowledged as necessary social labour.⁶⁴

The institutions and practices of self-governance enable us to speak without paradox of 'freedom in the realm of necessity'. It is crucially important that socially necessary labour is performed on the scale required for human flour-

64 See Federici 2019, Part Two.

ishing without the oppression and exploitation characterising the realm of necessity in past and present societies. This raises immensely important issues regarding organisational coherence, incentives, motivations, and so on that must be addressed in any plausible model of socialism. They are matters for the following chapters. The main point to note here is that besides freedom and development within the realm of necessity there is a freedom and development beyond what is necessary. As Marx wrote regarding the post-capitalist society he would endorse,

(T)he associated producers govern the human metabolism with nature in a rational way ... accomplishing it with the least expenditure of energy and in conditions most worthy and appropriate for their human nature. But this always remains a realm of necessity. The true realm of freedom, the development of human powers as an end in itself, begins beyond it, though it can only flourish with this realm of necessity as its basis. The reduction of the working day is the basic prerequisite.⁶⁵

One of capitalism's most striking features is the lack of correspondence between gains in productivity and the free time of the workforce. The relentless pressure to increase the time devoted to labour for capital has continued unabated.⁶⁶ Limits to the working day have been won only after extended struggles. Workers' victories are often met with capital flight to regions where those limits are not legislated. In the regions where limits are in force, overtime has been forced upon workers by threats of layoffs and peer pressure. Intensifications of the labour process have occurred, requiring greater time spent recovering from the workday. Longer commutes in effect extend the workday far past its official start and end.

There are few grounds to think that the vast increase in labour productivity in past decades has resulted in a decrease in the overall time appropriated by capital. If anything, the time colonised by capital has increased with the relentless commodification of leisure and the erosion of the divide separating the workplace from the household enabled by information technologies. For women bearing a burden of domestic labour alongside paid employment, the temporal pressures are especially oppressive.

In capitalism's legitimating ideologies, the fact that most workers spend most of their adult waking life in labour for capital is rarely seen as a matter of

65 Marx 1981, pp. 958–9.

66 Crary 2014.

significant concern. Proclaimed to be the result of 'free choices' to accept the terms of labour contracts, we are supposed to assume that the consumption of commodities workers purchase with their wages more than compensates for the time put at the disposal of capital's representatives.⁶⁷ For socialists, in contrast, there is structural coercion at the heart of the capital/wage labour relationship, and consumerism is not uncritically accepted as 'the good life'. Most relevant here is the way ample free time for forging deeper social relationships with family members, friends, and others with whom we have (or could form) meaningful and enriching social bonds, for participating in the life of our communities in ways that are not strictly speaking necessary for its reproduction, for pursuing projects of our own choosing, and so on, is an essential determination of a good society:

** The expansion of the realm of freedom is an essential component of the socialist project.*

To speak paradoxically (or dialectically, if you will), just as there is freedom in the realm of necessity, it is necessary that there be a realm of freedom in socialism. The overwhelming importance of the politics of (free) time in the socialist project is an enduring legacy of struggles of wage labour against capital over the last centuries, as well as feminist struggles against the 'double shift' combining wage labour with unpaid domestic labour.

As always, it is not the abstract principle but its actualisation that ultimately matters. While that can be anticipated in a model of socialism, it can only be realised in the concrete practices of a solidarity society.

7 Conclusion

The principles making up the body of a socialist constitution will not be based on what is taken to be 'natural', or on supposed revelations of divinely sanctioned social arrangements, or on the allegedly self-evident, or on purported deductions of transcendental reason. Nor will they be determined by extrapolating essential determinations of generalised commodity production and exchange (the hidden secret underlying the constitutional principles of capitalist republics). As argued in Section 1, the constitutional principles that artic-

67 The patriarchal assumption that women are 'naturally' suited to domestic labour is a no less ideological myth.

ulate the essential core of the socialist project are rationally defensible in light of the main lesson to be learned from emancipatory struggles in world history: ‘merely political’ emancipation is insufficient; struggles for emancipation must aim at the universal human emancipation, that is, a society whose ruling principle is the full and free development of every individual.

Free development in republican socialism requires collective self-governance without domination. Section 2 argued that this dimension of the socialist project justifies principles affirming the rights, forms of social organisation, and scope self-governance requires. Section 3 made the claim that the freedom of individuals to live the lives they chose to lead (consistent with the demands of solidarity) must be affirmed as well. Section 4 turned to principles relevant to the full development of the essential capabilities of every individual. Full development requires a form of social production effectively addressing the social needs of communities (more exactly, of individuals qua members of communities, termed *universal₁ needs*), the ‘basic’ social needs all individuals generally have (*universal₂ needs*), and 3) the *particular needs* of individuals for the particular goods foreseen to help them live the particular sorts of lives they have chosen for themselves.

Section 5 was devoted to two important constraints on social life demanded by solidarity across communities and across generations: every community must receive the same per capita share of investment funds and the same per capita share of the environmental footprint compatible with maintaining planetary states conducive to the flourishing of present and future generations. These two ‘solidarity constraints’ are also appropriately included in a socialist constitution, since they also express bedrock commitments of the socialist project. Section 6 then introduced three further core principles, the right of all individuals to free access to our shared intellectual and cultural heritage, the requirement that all forms of social labour be social acknowledged, and the commitment to a politics of time liberating social individuals from the ‘realm of necessity’ while expanding the ‘realm of freedom’.

A socialist constitution is an expression of the most basic commitments the members of solidarity society make to each other and to the generations to come. It is also an expression of a ‘secular faith’ that these commitments can be actualised.⁶⁸ If they are to be more than mere words, the constitutional principles introduced above must be embedded in concrete institutions and social practices. The chapters that follow present a model of socialist institutions and

68 Hägglund 2019.

practices that suggest how this might be accomplished. Marx's formulation of the ruling principle of a socialist society – the full and free development of every individual – will serve as a leitmotif throughout. The goal is to show that this ruling principle is feasible, and not a merely moralistic abstraction expressing vague utopian hopes.

The Local Level (1): The Democratic Determination of Social Needs and Production Proposals

The previous chapter presented a partial and provisional list of constitutional principles for republican socialism. These principles together express a collective commitment to construct and maintain a solidarity society. In our fraught historical moment, it is not sufficient to simply assert ‘another world is possible’. The task of this and the following chapters is to suggest at least a rough outline of the types of institutions and social practices that could grant socialist principles material actuality, distinguishing them from moral oughts.

Much more than vague generalities are required to establish the feasibility and normative acceptability of a model of socialism. But much less than a comprehensive picture of a social order must suffice. It would be foolish and arrogant for anyone to claim they have a complete vision of a future socialist society. Nonetheless, if we are to move forward in world history, it would be good to have at least a rough sense of what ‘moving forward’ would be moving towards.¹ The goal of this and the following chapters is to broadly outline institutional forms and social practices that 1) are objectively possible in our historical context, 2) coherently fit together within a social order capable of maintaining itself over time, 3) are adequate to the challenges of our historical moment as described in Chapters 2 and 3, and 4) embody the historical lessons expressed in the constitution principles introduced in the prior chapter.

The model of socialism developed here has never been instantiated. But none of its elements are unfamiliar. We do not have to imagine a utopian fantasy so different from the world we know that it belongs in science fiction. Unfortunately, even the most progressive aspects of the social world today

1 Marx famously rejected constructing abstract blueprints for a future society along the lines of utopian socialists. But he did endorse the Paris Commune. The Commune was crushed by forces of reaction before it could be scaled-up to regional, national, and international levels. Nonetheless, even after its demise Marx affirmed the ‘actuality’ of the model he extracted from the Commune insofar as it was a rationally defensible response to the challenges of that moment of world history. More specifically, he affirmed it as the political form for the self-emancipation of workers (Marx 1986a, p. 334).

are limited and distorted. To consider how these limits and distortions might be overcome requires stretching our political imaginations beyond their usual bounds, and certainly beyond the point where we can be assured of getting everything right. The goal is not to proclaim the sole acceptable arrangement for any future socialist society. It is instead to present a model determinate enough to establish that republican socialism is feasible and would count as a true advance in world history, while recognising that there may be an indeterminate range of acceptable alternatives. If, in the course of further collective discussion and practical experience, some features of the model presented here prove to require supplementation, revision, or even rejection, that is to be expected. The chapters that follow are a small contribution to an ongoing discussion that began long before the writing of this book and will continue long past its completion.

For purposes of presentation some starting point must be selected. Selecting where to begin is a straightforward matter when discussing a linear process with a distinct beginning, middle, and end. But strictly speaking none of the elements of a complex social framework like socialism can be considered adequately on its own. Every component affects every other. And yet we cannot talk about everything at the same time. We must start somewhere. But where?

The socialist project is to establish and maintain a superior alternative to capitalist market societies. The main distinguishing feature of the latter is production for profit within the social forms of dissociated sociality. In socialism, production is for social need within the social forms of solidarity.² A good place to start, then, is with the process of determining social needs through collective self-governance. We can then proceed to consider how units of production gain access to the resources they require to produce goods and services addressing those needs effectively, how the social agents and communities acquire needed goods and services, and related issues.

On the constitutional level social needs are specified in very general categories. How can they be more concretely determined and assessed? This is an extremely complex matter, needless to say. For ease of exposition, it makes sense to first consider a simple case, and then introduce complexities as we proceed. That approach rules out discussing need determination on the level

2 The process of 'production for social needs' is not completed until the user whose needs are to be addressed obtains the produced output. It would be accurate, then, to talk of 'production and distribution for social needs'. When, however, it is clear from the context that the entire process is meant, rather than 'production' in a narrow sense opposed to 'distribution', I shall use the shorter, less cumbersome, phrase.

of international socialism, even though the scope of socialism, no less than capitalism, is inherently global. It makes more sense, I think, to begin by examining the social organisation of production for social needs first in the smallest geographical area where a significant percentage of the goods and services produced in the area could be distributed for use in that same area.

The discussion of local production for local social needs will be considered at some length. This is not because it has more importance than other components of the model. In the socialism defended here not all production in a given locality addresses social needs there, and not all social needs there are addressed by local producers. Abstraction from these complications is made simply in order to not have to speak about everything at once. The discussion of this first dimension of the model is so extensive because its structures and processes are scaled-up on the regional, national, and international levels of the model, enabling discussion of them in later chapters to be more compressed.

I shall take the 'local level' here to be roughly a greater metropolitan area, including where possible agricultural districts providing food crops.³ If the goal were to provide a full blueprint it would be necessary to discuss particular neighbourhoods within a metropolitan area, rural areas with more dispersed populations, and similar social spaces with their own specificity and importance. There is, however, no reason to think that discussing them would change any fundamental features of the model.

Section 1 presents an institutional framework for determining social needs within forms of representative and direct participatory democracy. Section 2 argues that these social needs are best addressed through a process of indicative planning, as opposed to central planning requiring a comprehensive matrix of inputs and outputs. Section 3 considers the first step in the formation of an indicative plan, the requests of Production Collectives for social funding in the coming period. These requests include estimates of their production costs over that period, the topic of Section 4. Section 5 discusses a striking difference between the model of republican socialism defended here and market socialist models: the retained earnings that are important in the latter play no role in the former. A brief summary of the chapter is provided in the concluding Section 6.

3 Where soil conditions do not allow agriculture, other forms of local food production will still be possible (through, for example, the use of hydroponics and greenhouses). The overwhelming ecological importance of overcoming capitalism's decoupling of rural and urban life is emphatically and appropriately stressed in Magdoff and Williams 2017 and Westra 2018.

1 The Social Determination of Social Needs

The determination of social needs in socialism is a structured process. The structural components will be presented first, before turning to their specific roles.

1.1 *The Institutional Framework*

The first socialist institution to be mentioned is the local **Democratic Assembly**, a representative body (roughly analogous to a City Council in the United States), which elects a head (analogous to a mayor) from among its members.⁴ Its charge is to oversee the process of the democratic determination of needs as a whole in the locality, along with other matters of common community concern.

The argument for establishing a representative body rather than having all decisions of common concern made through direct participatory democracy is familiar: the required tasks are continuous and numerous, requiring an extensive commitment of time and effort to undertake adequately, including the time and effort required to acquire adequate background knowledge on the relevant issues and to appropriate the details of competing proposals to address them. When members of an Assembly are provided with ample time and resources, those tasks can be accomplished more successfully.⁵

In Hegelian terms, deliberations of the Democratic Assembly aim at results reconciling universality (the good of the community as a whole) and particularity (the good of particular individuals, households, and groups). For this to happen the various viewpoints in the locality need to be adequately represented in the Assembly, and the deliberations of its members should encourage them to modify their initial opinions in order to take into account the reasonable viewpoints of others.⁶ The public nature of all proceedings in republican socialism, and oversight by the other institutions of collective self-governance (socialist Media, Community Activist Groups, and so on), contribute to the latter. Regarding the former, there is no one correct way to select a local Democratic Assembly suited to meeting these conditions. The option suggested here

4 Poulantzas noted a tendency to authoritarian statism in supposedly democratic capitalism, manifested (among other ways) in a transfer of power from the legislature to the executive (Poulantzas 1975, pp. 55–7). Having executive authorities elected by the legislature works against this tendency.

5 The critical assessment of the ‘Assemblism’ of the Occupy movement in Landemore 2020 is of interest here.

6 Here, and throughout, solidarity demands that we do not impose policies on others they have good reasons to reject.

is to have one half of its members elected to represent particular neighbourhoods and one half elected by voters in the locality as a whole.⁷ The first set of members would tend to be especially concerned with the good of their particular neighbourhoods, the second would perhaps be more prone to consider the good of the area as a whole from the start. A system of ranked voting is employed throughout on the grounds that it tends to generate results more consistent with the democratic will of citizens than alternatives. Finally, three aspects of the Paris Commune designed to prevent those holding positions of authority from establishing an alien state apparatus separate and above society are to be endorsed. All members of Democratic Assemblies are elected, subject to recall, and receive only average workers' income.⁸ When these conditions are met the local Democratic Assembly is a constituted power tied to – rather than attempting to transcend – the constituting power of the full ensemble of social individuals in their social relationships.

The freedom of association guaranteed in the socialist constitution allows the formation of political parties. Freedom of speech allows any candidate for any office to argue for a party's agenda. An alternative to selecting members of the Assembly through geographically based voting would be for competing political parties to propose slates of candidates, with seats awarded in proportion to the votes parties receive above some minimum cutoff (say 5% of total votes cast). This arrangement enables a plurality of particular perspectives to be represented in the Assembly's deliberations, helping the collective body reach a decision articulating (however provisionally and fallibly) a concrete universality that is not unreasonable from the particular points of view of those affected. It is, however, one thing to allow party politics, quite another to institutionalise it as an essential component of socialist politics.

Competing political parties may be essential in capitalist democracies, where factions of capital regularly have opposed interests and priorities in a

7 Should groups that have been marginalised and oppressed under capitalism have a proportion of seats on representative bodies reserved for them in socialism? Even if systematic sexism, racism, ethnocentrism, and so on are overcome in the certain respects, might not cultural prejudices and the effects of past injustices persist in a way that makes supposedly 'representative' bodies all too unrepresentative? If a systematic pattern of a group lacking representation can be established, a solidarity society must take effective steps to end that pattern. Mandated group representation might be one of those steps. But I do not think it should be seen as a permanent and essential feature of a socialist society. Like differential rates of per capita investment and environmental footprints exceeding a per capita share of what is sustainable in the aggregate, its role would be limited to a transitional period.

8 Marx 1986a, pp. 331–2. The importance of the last determination is forcefully stressed in Reuten 2023.

variety of different dimensions (due to differences within sectors, between sectors, between exporters and importers, multinational and local firms, and so on), motivating them to seek coalitions with each other and with other groupings in the society. Political parties reflect relatively stable coalitions of different classes and interest groups united by a common programme, with elections determining which coalition has sufficient strength to become a ruling bloc under the hegemony of some faction of capital.⁹

A solidarity society lacks comparable structural antagonisms. Social conflicts will undoubtedly arise. But they will be far more contingent, varied, and unpredictable than in capitalism. Social movements will arise in response to the most significant disagreements and dissipate when they are resolved. Social individuals' allegiance and active participation in social movements will also arise and pass away depending on the seriousness of the issues involved, how long they persist without being resolved, and a host of contingent, varied, and unpredictable factors. This makes politics in socialism more like the quickly shifting images of kaleidoscope than the relatively fixed vistas of competing political parties in capitalist regimes. Voting to select members of the Democratic Assembly on a geographical basis leaves more space for a flexible politics of social movements and fluid alliances than party-based politics does.

There are also reasons to think that not tying members to a party platform would make them more open to listening to the voices of others, making it easier for deliberations to aim at the concrete universality of decisions that are not unreasonable from the point of view of those affected by them. And it would avoid the danger of entrenched political parties for whom attaining and retaining power are ends in themselves. While the freedom of association allows political parties to be formed at any time in any place, there are, I believe, legitimate reasons to not include them as an entrenched institutional feature of republican socialism.

The members of local Democratic Assemblies (and all other representative bodies in socialism) should have staggered terms. Terms should also be limited, but extended enough so that at any given time most members would have developed significant background and specialised knowledge on a range of central issues, and ample experience to mentor new members. Perhaps every two years a third of the membership could be selected for a six-year term. In order to extend the number of people who have experience in this aspect of

9 Gramsci's *Political Notebooks* remain an indispensable guide to this dimension of politics in modern capitalism. See Thomas 2009.

self-rule, it might be best to limit membership to one term at a time, with a two-year interval before being eligible to serve again. If ex-members were eligible to re-join an Assembly after the interval had elapsed, the gain in experience and expertise might be worth a somewhat lower number of people participating in this form of self-governance.

A second main institutional form involved in the determination of social needs on the local level are **Community Associations**. One of the great lessons of the previous century is that the voices of the final users of produced outputs must be strong and effective. In corporate advertising in capitalism users are treated as objects to be manipulated. In so-called state socialism the voices of final users were mostly inaudible or ignored. The task of Community Associations is to make sure these voices are heard and paid attention to in social production.

The Democratic Assembly is an elected representative body. As noted in the previous chapter, that form of democratic organisation has weaknesses as well as strengths. Those elected tend to have specific personality traits (facility in rhetoric, networking skills, charisma, personal ambitions, enjoyment of coalition building as a sort of game, special fascination with the nuts and bolts of policy making, etc.) that set them apart from other social agents. And, of course, when decisions are made by elected representatives they are not made by the vast majority of citizens. If elected representative bodies have too much weight in an institutional framework, there is a danger of a separate political class being formed, a danger not entirely removed by limiting terms. If leaving all matters to plebiscites (direct participatory democracy) is not acceptable due to the exorbitant (impossible, actually) demands of time and effort imposed on all citizens, other ways of removing that danger must be found. Representative bodies whose membership is determined by sortition are one way. Participating in deliberative minipublics enables ordinary citizens to play a central role in public life. Randomly selected individuals may also represent viewpoints found in the local community that are not adequately represented in the Democratic Assembly.

In the socialist model presented in this work all adults whose main residence is in the locality are eligible for selection by lot for membership in Community Associations. Six-year terms with one third of membership selected every two years seems suitable here too, with some period (two years perhaps) after the end of a term before that person is eligible for selection again. While no one should be coerced to serve on an Association, in a socialist society it is reasonable to expect that there would be a general ethos for those selected by lot to serve unless there are relatively serious impediments to doing so. This is a form of socially necessary labour (as is membership in a Democratic Assembly) and

is acknowledged as such by members receiving average worker income, along with a right to return to their previous occupations.

The possibility of being randomly selected to serve on a Community Association can be expected to strengthen the motivation to be informed about social issues, resulting in a higher general level of political consciousness. Also, over time the percentage of people will grow who have themselves been a member of a Community Association, or know a family member, friend, co-worker, or neighbour who has served on one. That too lessens the danger of a gap growing between the representing and the represented. The danger is lessened further when the substance of the discussions in Associations are quickly and easily available to any interested parties and the Associations have a mandate to invite and consider comments and proposals from Community Activist Groups and individuals concerned with relevant issues.

The odds of being selected to join a Community Association are relatively low. A vibrant socialist civil society requires a far broader range of political agency, including the **Community Activist Groups** just mentioned. These are self-selecting representative bodies with a special interest in a specific matter of social concern. In a dynamic socialist civil society, many such groups will emerge from social movements (environmental movements, consumer safety movements, feminist movements, anti-racist movements, and so on). Besides providing input for Community Associations their activities include educating the populace on specific issues, recruiting and training future activists in these movements, developing proposals for social policies, lobbying the Democratic Assembly to gather support for those proposals, supporting candidates in elections to the Assembly, participating in formal public forums and public discussions outside of organised forums, and so on. They play an immensely important role in enabling different social perspectives to become visible and different assessments and proposals to be articulated.

In the present context, the activity of most interest is advocating for the production of social goods addressing needs of special concern to the social movements. The democratic determination of social needs must take advantage of the energy and practical knowledge developed in these movements.¹⁰

10 What of far right-wing activist groups? Today, as in previous periods of capitalism, they have inflicted horrific social harms. A number of factors have enabled this, including a generalised sense of economic insecurity, a powerful propaganda apparatus designed to mobilise that unease and transform it into anger against victimisation by diabolical 'others', and the immense financial support of members of a plutocracy benefitting from social divisions (Wolf 2023a, Chapter 6). These factors are absent in socialism. The paths of social change are determined in open democratic processes and not imposed

Local **Worker Collectives** dedicated to the production and distribution of goods and services addressing social wants and needs in their local area also have a central role in republican socialism. These will accordingly often be referred to as **Production Collectives**.¹¹ The appropriate number of members is the number needed to fulfil the Collective's commitments, as estimated by the members of the enterprise itself. When additional members are required, a free agreement must be reached with potential candidates.

This arrangement is analogous in some respects to the labour markets of capitalism. As in capitalism, there is freedom of occupation; no one is assigned to a particular sector or enterprise by any central plan. And just as in capitalism no one has a right to be employed in any given sector or enterprise, no one in the socialist model can insist on becoming a member of a Collective operating in some sector. (If no one wants hula hoops, my dreams of designing them for mass consumption will go as unfulfilled in socialism as it would in capitalism.) There is a selection mechanism resulting in some being accepted in a sector or enterprise of their choice and some not, analogous to the results of labour markets. The disanalogies, however, are far stronger. To join a Worker Collective is to be accepted into a community. That is not at all similar to selling of your labour power as if it were a commodity.

Finally, three sorts of organisations whose operation is not limited to the local level should be mentioned here due to the role they play in local production for local needs. **Sector Agencies** monitor the productive capabilities and operations of the Production Collectives operating in a given sector. A national **Agency for Technical Support** provides the members of institutions of socialist self-governance with support on research methodologies and other technical matters. **Research Centres** develop the scientific-technological knowledge underlying product and process innovations implemented by Production Collectives. **Social Investment Centres** allocate the funds Production Collectives require to produce goods and services addressing social needs. These funds

behind the backs of social agents by alien forces. The two solidarity constraints make any claim that some communities are victimised by others implausible. Most importantly of all, there would be no plutocracy with extensive private resources to exacerbate social animosities for their private benefit. Deprived of the soil that nurtures them, right-wing activist groups would not prosper. As long their members act in a manner consistent with the socialist constitution there is no need to impose any special restrictions.

- 11 Democratic Assemblies and Community Associations also have the social form of self-managed Worker Collectives. When the more generic 'Worker Collective' terminology is used it will always be obvious from the context what sort of Collective is being referred to.

are provided by a **Social Transaction Centre**. It also allocates various forms of income outside the formally organised system of production and maintains accounts tracking expenditures made to acquire production and consumption goods. The **Judicial System** evaluates the workings of institutions and the behaviour of social agents from the standpoint of the constitutional commitments of a solidarity society. These components of the institutional framework of republican socialism will be discussed at length below.

As noted, the democratic determination of needs in the model is a structured process. After this discussion of the components of the institutional structure, it is now time to turn to the process.

1.2 *The Role of Community Associations*

Three main categories of social need were affirmed in the socialist constitution sketched in the previous chapter. To review:

* Universal₁ needs are needs every member of the community shares as a member of that community for the appropriate background conditions of social life. These include the need for adequate public infrastructure (transportation, energy, water, and information networks, for example), public parks and recreation facilities, public sites for festivals, concert halls, museums, and so on. Maintaining the various public bodies of socialist self-governance also counts as a universal₁ need.¹² The need for a dynamic innovation system fits under this category as well.¹³

* Universal₂ needs are those each member of the community has as a distinct embodied social individual for the generally necessary conditions for full and free development in the given socio-historical context, including the so-called 'basic' needs for nutrition, housing, health care, and education. We can now add that individual members of a socialist society also have universal₂ needs for opportunities to engage in meaningful

12 There is in addition a universal₁ need for means of production necessary to produce the goods that address universal and particular needs in the community. Their provision will be considered later in this chapter.

13 The innovation system is more appropriately considered on 'higher' levels of self-governing discussed in later chapters. In this context 'higher' simply refers to a more extensive geographical scope. It is not meant to convey either greater intrinsic importance, or a more reliable epistemological standpoint (seeing a larger landscape generally comes at the cost of losing sight of local details). As long as this is kept in mind, 'higher' can be used without scare quotes.

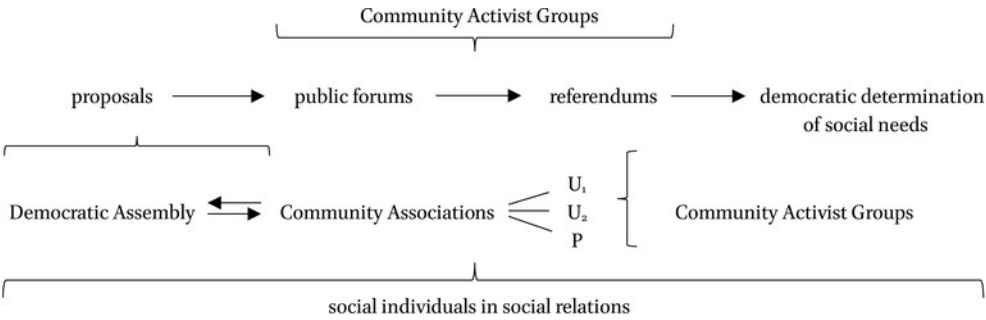


FIGURE 5 The process of determining social needs

and enriching activities in both the realm of necessity and the realm of freedom. The need for free time must be given special emphasis as a condition of the possibility for meaningful and enriching activities in both realms.

* Particular needs, finally, are needs for the particular goods individuals and groups of individuals require in order to live the particular ways of life they have freely chosen to live, based on their particular conceptions of the good life consistent with universal solidarity.

The socialist constitution proposed in the previous chapter affirms a collective commitment to establish and maintain institutions and practices providing goods and services effectively addressing all three categories of needs. Without the actualisation of this commitment the full and free development of every individual cannot truly be the ruling principle of the society. This actualisation requires going beyond general categories of social needs. The specific social needs in specific local communities must be determined. How can this be accomplished in a democratic manner that avoids both personal and impersonal domination? Figure 5 provides a picture of the process recommended here, to be elaborated in the following sections.

I shall assume that the local-level indicative plan (as well as the higher-level plans discussed later in this work) covers a five-year period. The first step in formulating this plan is to form three Community Associations, one for each the three general categories of social needs, their members selected by lot from the adult members of the local community. Each is charged with two main tasks.

First, they must assess how well a general category of social needs has been addressed in the locality in the present period. This involves undertaking extensive qualitative and quantitative surveys to discover whether members of

the community think their needs are being addressed adequately.¹⁴ They also solicit evaluations of need provision from Community Activist Groups, individual citizens, and prominent researchers in relevant fields.¹⁵

Second, they must propose goals for social production addressing the category of social needs in the coming period. These proposals are in part based on an extrapolation of present trends into the future. In the age of Big Data, acquisitions from local producers by local individuals, households, and other social groupings, can be easily aggregated and processed by predictive algorithms generated through machine learning. This allows judgements about likely demand for goods and services in the future to be far more informed than ever before.¹⁶ The extrapolations are then modified to address qualitative or quantitative shortcomings in present production relevant to the given category of need. New products that promise to better address needs in that category must be taken into account, if they can be reasonably foreseen to become available in the relevant time frame.¹⁷

14 A special national Agency for Technical Support will be established to facilitate the work of these Community Associations (see Chapter 4, Section 2.6 above). It is charged with providing Community Associations with support staff with expertise in quantitative and qualitative survey methods and other specialised tools that individuals randomly selected from the community cannot be expected to have mastered. People with special expertise in research methodologies will, of course, have their own political ideas. They can be expected to share them informally with the Association members they work with. They do not however, participate in a Community Association's deliberations and decisions.

15 Community Associations may also note which units of production have been especially successful at producing or distributing products that effectively address social needs, and which have been especially disappointing in that regard, making use of data provided by Sector Agencies. The way specific Production Collectives have or haven't responded to feedback regarding their products from the individuals and associations of individuals that use them is another relevant consideration here, as is their record of innovation. (These assessments play a role in the evaluation of requests for social investment discussed below).

16 The national Agency providing technical support staff to Community Associations comes into play here, since individuals randomly selected from the community cannot be expected to have mastered use of predictive algorithms.

17 Research Centres are in a position to anticipate at least some general paths of innovations that may be available in the coming period, both short-term innovations very likely to be available and more speculative ones that could possibly come about over the next five years. That is obviously relevant information for the setting of priorities for the future, although the inescapable uncertainties of the innovation process cannot be overlooked. The system of Research Centres will continually inform the public about potential innovations that may lead to products addressing existing needs in new ways or create new needs. The Community Associations can then try to get a general sense of the degree of enthusiasm (or curiosity, indifference, or concern) for possible new products in their locality,

In some cases, the provision of specific goods will be a priority, such as a bridge in a particular place to better address the universal₁ need for a transportation network conducive to human flourishing. In most cases priorities will be defined in more general terms, prioritising, for example, more cultural or recreational facilities without further specification. The Community Associations are *not* asked to provide a comprehensive list of all the goods and services to be consumed by individuals, associations of individuals, or social organisations in the coming five years. In this model of socialism planning does *not* involve construction of a comprehensive matrix of inputs and outputs.

Each Community Association should attempt to reach a consensus on priorities in its area (this may take the form of a consensus about the compromise most acceptable to those with different views). When this is not possible, a majority vote determines the results.

After the three Associations have formulated priorities within the general categories of needs, they then meet jointly to deliberate on priorities across the three categories. Alternatively, each Association could elect representatives to a higher-order body, charged with integrating the three sets of priorities into a single set of priorities for social investment.

No locality can invest more than its per capita share of investment funds; no locality can have an 'environmental footprint' larger than its share of the total human footprint compatible with sustaining an ecosystem compatible with human flourishing. These 'solidarity constraints' are not alien imperatives externally imposed on socialist communities; they are intrinsic to the socialist project of overcoming all forms of imperialism. But they do impose limits. Not all wants can be met. Trade-offs within and across categories of social needs and the social goods addressing necessarily have to be made. The more provision of goods addressing universal₁ needs in a locality, for instance, the smaller the share of social investment that can be devoted to addressing universal₂ and particular needs.

Making these trade-offs is not straightforward. The three categories of social needs and goods are incommensurable, as are the more specific needs and goods within each category. Whether, for example, a particular community at a

along with any specific concerns people might have for them. Research Centres must then be informed of the results and take them into account when selecting the research and development projects to undertake. A high level of enthusiasm for potential innovations provides a *prima facie* reason for a relatively high level of investment in projects developing them. Everything else being more or less equal, potential innovations that raise a host of social concerns warrant a slower rate of investment, or perhaps even a delay in introducing them (see Chapter 9, Section 7.2 below).

particular point in time should devote more resources to improving its network for energy distribution or its housing stock cannot be resolved by reducing use of the network and the housing to commensurable quantitative units. There are rules of thumb that can be followed; universally meeting a basic need like nutrition has more weight than providing a particular good required to pursue a hobby. In most cases, however, informed practical judgement, guided by the fundamental commitments articulated in a socialist constitution, is required. Retreating behind numbers and algorithms would be an abdication of the collective responsibility to undertake the practical deliberations required for self-governance.

Not all trade-offs are compatible with republican socialism. In the socialist constitution sketched in the previous chapter, the universal₁ goods providing background conditions for a flourishing community, the universal₂ goods addressing the basic needs of every social individual, and the particular needs of specific individuals and groups, are explicitly acknowledged as distinct categories of social needs, each of irreducible importance. In other words, addressing all three needs adequately is a core commitment of the socialist project. No determination of social priorities can justify neglecting one category of social needs for the sake of another. The oversight of individual activists, Community Activist Groups, the Democratic Assembly, and the socialist Judicial system helps ensure that this does not happen.

The three Community Associations as a whole (or their delegated representatives) must attempt to reach a consensus on priorities across the three general categories of social needs. When this is not possible, a supermajority vote will determine the results. If no proposed list of priorities receives a supermajority of votes, the top two proposals emerging from ranked voting are selected.

Finally, there may be cases where unforeseen emergencies regarding needs arise in the local community. Members of Community Associations have a special responsibility to pressure the local Democratic Assembly (and the local Social Investment Centres described below) to address the situation quickly, either by themselves or with the support of higher-level Assemblies and Centres operating on regional, national, or international levels. (Other tasks of the Associations will be mentioned below.)

1.3 *The Role of the Democratic Assembly and the Community as a Whole*

Representative bodies selected by sortition like the Community Associations play a major role in our model of socialism. But crucial community decisions should not be entirely left to a small number of randomly selected individuals.

The members of the Community Associations represent those who use goods to address their needs, while the members of the Democratic Assembly must take into account the process of social production to address social needs as a whole. The two perspectives are complementary.

In the next stage of the structured process the elected local Democratic Assembly deliberates on the proposal(s) forwarded by the higher-level Community Association. If the members of the Assembly agree that it (or they) represent the strongest option(s) (or if they propose minor modifications the Community Associations regard as 'friendly amendments'), a series of in-person and virtual public forums are held to discuss it (them).¹⁸ If the members of the Assembly believe that some other proposed ranking of priorities would be superior to that (those) proposed by the Associations, it is submitted to public deliberation along with the proposal(s) of the Community Associations.

It should also be possible for Community Activist Groups to organise petition drives to prioritise some form of social investment. If a significant percentage (twenty percent, say) of adult citizens sign a petition, this proposal could then be considered in public forums alongside those of the Community Associations and Democratic Assembly. It might be feared that this grants self-selecting, unelected, and relatively small subsets of the community excessive power to determine public discussion and the path of socialist development. But other features of the model – the roles of Community Associations, Democratic Assemblies, and others yet to be mentioned – work to minimise this danger. The more significant consideration is that extending public deliberations about social needs to views with considerable support that would otherwise be excluded furthers the democratic legitimacy of a republican socialist regime.

The media of a socialist society must take every feasible measure to ensure that the public at large is informed of all relevant issues and arguments. All citizens must have an opportunity to communicate any concerns they might have in the public sphere. At the conclusion of the period of public deliberation a referendum is held. If more than two proposals are being considered a system of ranked voting is used to determine the option selected. The option selected in effect determines the general shape of the local budget.

It is possible to imagine an alternative process of determining social needs based solely on radical participatory democracy, with no role for representative bodies. Proposals might be made solely in public forums open to all, with

¹⁸ Here and throughout this work, 'agreement' is taken to mean 'consensus if possible (including consensus over a compromise); the view of the majority if not'.

a referendum following (or perhaps a series of referendums where proposals receiving the fewest votes in one are eliminated in the next). Once again, however, we should not assume that everyone in socialism will freely choose to devote most of their available time to active engagement in political matters. The more a model depends on that assumption, the less feasible it is, and the less normatively attractive it will be as well.

The model of socialism defended here presupposes a willingness to participate in political life far greater than in the privatised social order of contemporary capitalism. But it does not assume everyone's conception of the good life will be a life devoted to political discourse. A model of socialism aiming at self-governance without excessive demands of time, effort, and expertise must, I think, incorporate representative bodies whose members have made a special commitment to devote time and effort required to study political issues for a (limited) period of their lives. In my (contestable) view, the proposal outlined above is a reasonable way of making the trade-off between accountable delegation and direct participation. The crucial matters are that the determination of social needs does not presuppose or lead to an apparently transcendent state apparatus alien from the society, that the process of determination fosters mass participation without imposing excessive demands on the time, effort, and expertise of citizens, and that a social consensus emerges through the comparison and contrast of divergent social perspectives, evaluations, and proposals.¹⁹

During the five-year period a plan is in place, each Community Association continues to monitor the provision of goods addressing the relevant category of needs in the locality, composing an annual report to the local Democratic Assembly and Social Investment Centres (considered below) providing a quantitative and qualitative assessment of provision and proposing shifts in investment taking its assessment and newly available innovations into account. The Democratic Assembly can then either endorse those shifts or not in instructions to the Social Investment Centres. Drafts of these reports are released to the public for comments, and the final document must include a section detailing how Associations took these comments into account in their final reports.

Community Associations and the other agents and organisations involved in determining social needs are assigned important responsibilities in this model. But they are not they overburdened with overwhelming challenges. Their deliberations do not begin with a blank slate, but with established patterns of indi-

19 In this sense the model of republican socialism incorporates a kind of 'planning for conflict', as advocated by Mandarini and Toscano (2020).

vidual and social consumption. The task is to decide on modifications of those patterns, based on the goods used to address social needs in the community in the present, making modifications as appropriate in changed circumstances. The modifications sometimes regard specific goods to address specific needs. Most often, however, the requested modifications are formulated in general terms, general types of goods and general priorities among the needs they address.

This is a far easier task than attempting to construct a comprehensive matrix of specific inputs and outputs. Advances in information technologies make access to relevant data regarding needs far easier and on a far more extensive scale than ever before in human history. Machine learning can be expected to continually improve the accuracy of predictive algorithms in anticipating trends. In many cases it will be fairly obvious that innovations already embraced in other places are likely to be locally embraced in coming years, or that an innovation long wished for will be used when it is finally available.

None of this implies that decisions about social needs and priorities among them will ever be *pro forma* or should ever be left to computer programs to decide. There are political issues posed that need to be subject to political discussion. Republican socialism is not a technocratic management of things.

I take the success of participatory planning in Porto Alegre as strong empirical evidence that the democratic determination of needs sketched in Sections 1.2 and 1.3 are feasible. A recent study of its accomplishments and limitations concluded that the success of participatory budgeting depends on four main factors: 1) well-structured participatory arrangements to ensure participation from a wide range of actors across society; 2) adequate financial resources; 3) political commitment and flexibility to adjust to changing political realities; and 4) government commitment to implement the proposals the process generates.²⁰ Unfortunately, the structural power and inequalities of Brazil prevented these preconditions from being maintained. The model of republican socialism outlined in this work would, I think, maintain all four preconditions over time.

The procedures just outlined aim at a democratic determination of social needs that would be a world historical advance over the determinations of social needs in capitalism. A defence of this claim follows.

20 Mahendra et al. 2021.

1.4 *Some Comparisons with Capitalism*

1.4.1 Universal₁ Needs

The phrase ‘private wealth, public squalor’ cannot be applied everywhere in capitalism. Many communities have an extensive public space of immense complexity and technical sophistication, with ample well-designed bridges, airport facilities, harbours, roads, charging stations, parks, recreational facilities for the public, and other public goods. Nonetheless, the slogan has the ring of truth. In poorer communities throughout the capitalist world, the built environment provided by public funds is woefully inadequate in providing universal₁ goods. And in all communities, rich or poor, liberal or conservative, the infrastructure built with public monies tends to be concentrated in projects foreseen to contribute to private capital accumulation, neglecting those that would further human flourishing more.²¹

It is not the case that the process described above would result in every worthwhile public project being funded. Trade-offs have to be made and decisions will sometimes be mistaken. But the first solidarity constraint guarantees that every locality will receive its fair share of investment funds. When this is combined with the role of elected Democratic Assemblies, Community Associations, Community Activist Groups, public forums, and public referendums, the result is a systematic tendency for universal₁ needs that all individuals share as members of a community to be far more adequately addressed than in capitalist regimes.

1.4.2 Universal₂ Needs

Numerous capitalist societies have made formal commitments to provide for the basic needs of their citizens. But the scope of basic needs tends to be defined very narrowly. In the United States, to pick a particularly egregious example, health care is not included, despite the fact that access to such care is obviously a fundamental requirement for a decent life. It is questionable whether even the most generous capitalist welfare state includes everything that should be included under the category ‘basic needs’. It is not open to question that the severe inequality and poverty stemming from the systematic

21 It should not shock anyone to discover that the formal representative democracy of contemporary capitalism is quite compatible with a degree of ‘crony capitalism’ comparable to that found in regimes lacking formal democracy. The voices of local realtors and developers in city councils across the US is an especially blatant example, distorting the built-environment and the provision of public services, as David Harvey and other social geographers have documented. See Harvey 2012.

tendency to uneven development prevent basic needs from being addressed adequately throughout the capitalist world system.

In this context we must also recall that it is one thing to make a commitment, quite another to carry it out consistently and comprehensively. Many regimes – not excluding the most ‘advanced democracies’ – have made verbal commitments to meet at least some of the basic needs of their members, only to ignore those commitments for significant portions of their society for extended periods of time. There are unmistakeable tendencies in global capitalism for these commitments to weaken whenever economic growth slows down, or whenever the balance of political forces shifts in favour of right-wing blocs. In even the most favourable circumstances access to medical treatment and education for the wealthy are strikingly different from what is made available to the poor.

The focus of the present chapter is local production for local needs. As argued above, however, socialism is inherently internationalist. The relevance of this here is that the list of universal₂ needs that must be adequately addressed throughout the socialist world (and what counts as ‘adequately’) is determined on the international level by the international Democratic Assembly discussed in Chapter 9. The list cannot be shortened (or the standard of adequacy weakened) on the local level. Fundamental life prospects cannot be left to the contingencies of geography or local preferences.²²

In a solidarity society whose ruling purpose is the full and free development of every individual, everyone must be provided access to quality health care system, quality education, and other basic needs we all have in common. A socialism mandating universal access to the goods and services required to address these needs effectively would be an advance over capitalist market societies in this important regard.

The second category of universal needs raises complications not found in the first. The need for nutrition – like the need for adequate infrastructure, health care, a health system, education – is universal, unlike the needs that

22 Localities can in effect extend the list by providing all members of the local community with the (for now) particular goods that in the consensus view of the members of the locality should be considered universal₂ goods. New research on what generally furthers human well-being may support an extension. New advances in productive capacity may show an extension is feasible. If a majority of its members believe this to be the case, a series of public forums can be held to discuss the proposal, followed by a referendum requiring a majority (or supermajority) of the community to affirm. Expanding investment to address universal₂ needs beyond the level fixed by the international Assembly leaves less for investment in other areas. It is up to the community itself to decide whether the trade-off is warranted. This is another example of how politics does not end in socialism.

we have as a result of particular interests and capabilities.²³ Nonetheless, it is very likely few members will always want to eat in public cafeterias providing universal and free access to food, analogous to the universal and free access to public bridges, hospitals, and schools. The process of selecting, preparing, and consuming food can manifest and reinforce special social relationships within households and between friends or acquaintances. Most individuals and households in a socialist society can be expected to prefer selecting, preparing, and consuming of food themselves much of the time, in effect addressing the universal need for nutrition as if it were a particular need. Similarly, while clothing is also a universal₂ ('basic') need, shared by all social individuals, our choice of clothes expresses our particularity. Most everyone will strongly also prefer to treat clothing as if it were a particular good. If the full and free development of every individual is the ultimate goal of a socialist society, forcing everyone to wear a uniform would be misguided to say the least.

Housing raises similar issues. It could be provided in a manner paralleling universal₁ goods like infrastructure, hospitals, and schools, with a single system of public housing. Just as access to infrastructure, hospitals, and schools is determined by universal principles in socialism, access to the public housing system could be determined by universal principles ('larger households require bigger homes', for example). Most social individuals, however, are likely to prefer that housing be treated as if it were a particular good, a matter for particular choice, despite the fact that it addresses a universal need.

Infrastructure and other goods addressing universal₁ social needs (roads, bridges, festivals, hospitals, schools, etc.) are provided to the public in general. But the goods addressing universal nutritional, clothing, and housing needs can be treated like particular goods addressing particular needs, with individuals and households having the freedom to choose for themselves the goods they wish to use to address their universal₂ needs.

At the present moment of world history, it is materially possible to establish both free public access to basic nutrition through an extensive public cafeteria system and a system offering a wide variety of different sorts of foods to acquire with income as particular goods. A range of clothes could also be freely provided, along with options to acquire items outside that range with personal income. And there could be both a system of public housing and houses that could be acquired as if housing were a particular good, rather than a universal good addressing a universal₂ need. Why not offer both options in socialism?

23 Of course, once 'inside' the health care and education systems, the specific medical treatments and educational instruction provided to different individuals must take into account individual differences. Similarly, individuals can have distinct dietary needs and restrictions.

What matters is that each individual has access to goods effectively addressing the universal needs we have as distinct individual human beings. The specific social mechanisms that accomplish this goal are secondary, so long as they are truly effective, truly universal, and truly compatible with the demands of solidarity. Any complications will not prevent Community Associations (and the Democratic Assembly, Community Activist Groups, members of the community at large, and so on) from being able to critically assess how adequately universal₂ goods are provided, or from determining priorities for investments to produce them in the coming period.

1.4.3 Particular Needs

We have endorsed Marx's call for a society whose ruling principle is the full and free development of each individual. A solidarity society is not an aggregate of supposed monads supposedly furthering their private self-interest (while unwittingly subjected collectively to the impersonal imperatives of capital). But neither is it a collectivism based on repression of the particularity of social individuals. In republican socialism there is a complex dialectical relationship between 'each' and 'all'. The good of all must be broadly compatible with the good of each, and vice-versa. A creative tension between the two is welcome; an entrenched structural antagonism is not.

The 'good of each' requires that the universal ('basic') needs all social individuals have are effectively addressed. But the good of each also involves having the freedom to choose the particular sorts of life you want to lead, and the freedom and resources to live out that choice while maintaining solidarity with others. This 'right to particularity' is affirmed in the socialist constitution, but that is not sufficient. The right must have material actuality in social practices such as choice of occupation, decisions to form households and join voluntary associations, accepting the responsibilities of parenthood, selecting the music we listen to and movies we watch, and countless other acts of everyday life.

It is immensely important that the socialist model leave space for legitimate expressions of the right to particularity. While decisions regarding infrastructure, the health system, the education system, and so on, should be made collectively, we do not want decisions determining the particular sorts of lives particular individuals and groups live made collectively. There is a moment of truth in the liberal republican precept that self-governing on the level of community as a whole must allow space for self-governing on the level of individual persons and groups. Socialism incorporates a revised concept of individual freedom, one that is both more consistent with the demands of solidarity than the liberal notion of individual freedom and incompatible with the impersonal

domination of capital the liberal notion is all too compatible with. But it sublates (incorporates and goes beyond), rather than negates, that notion.

The third Community Association is tasked with assessing the adequacy of how particular needs have been addressed in the local community and proposing how they can be addressed more effectively in the future. This Association also faces special challenges accomplishing its task. The future infrastructure and other universal₁ needs of a community over a medium-term period, and the goods needed to address fundamental needs social individuals have in common as distinct individuals, can be anticipated reasonably accurately.²⁴ The particular goods addressing particular needs are far more numerous, diverse, contingent, and changing than those addressing universal₁ and universal₂ needs. Further, while defensible determinations of universal needs and universal goods can be made from a third-party perspective, determining the specific goods that promise to address particular needs are best left to the first-person perspective of the social individuals (and associations of individuals) whose needs they are. Fortunately, the third Community Association is not without tools to aid its work.

In contemporary 'surveillance capitalism' extensive electronic records are kept of purchases by individuals, along with expressions of their interest in specific products or general types of products.²⁵ Other information that seems to have little direct connection with purchasing is also collected on a massive scale. Marketers then use increasingly sophisticated algorithms to extract predictions regarding the sort of purchases that an individual or household might make from this data, as well as the sorts of ads they are most susceptible to and the points in time when their susceptibility is highest. Corporate advertising in capitalism counts as the most scientifically and technologically sophisticated system of mass manipulation of subjective dispositions in human history.²⁶

There is no place for such manipulation in socialism. Nonetheless, when suitably anonymised, information technologies make it possible to gain comprehensive information about the sort of particular goods that have been acquired or ordered by individuals and households relatively quickly at very

24 It is, of course, always possible that unforeseen emergencies will arise. But with the aid of higher-order (regional, national, international) bodies the capability to respond to unforeseen emergencies in a locality can be maintained.

25 Foster and McChesney 2014.

26 In an analogous fashion, political messaging has been used on a previously unimaginable scale to spur individuals and groups to support political causes that might not otherwise be supported, with predictably pernicious consequences.

low social cost. Further, just as sites like Amazon enable capitalist producers and distributors to inform potential customers of the goods they anticipate offering in the near future, a socialised electronic platform could do the same and enable individuals and household to preorder specific goods or express an interest in acquiring them later. As is also the case today, predictions about the potential new goods that individuals are likely to become interested in acquiring can be extrapolated from data regarding past acquisitions with the aid of algorithms detecting patterns over time. All of this information could be freely available to the Community Associations assessing the provision of particular needs (as well as to any other formal organisation, activist group, or interested individual).

The democratic determination of needs only fixes the goals of social production (some specific, most general). The social forms organising social action aiming at those ends must still be considered, beginning with the discussion of Production Collectives in Section 3. First, however, some comments on Daniel Saros model of socialism and the inductive planning defended here will be made.

2 Two Notes

2.1 *A Note on Saros*

Daniel Saros has constructed a model of ‘platform socialism’ centring on this use of information technologies.²⁷ His interesting proposals warrant discussion here, since the process of determining social needs in his model of socialism differs in significant ways from that introduced in the previous section.

In Saros’s model every unit of production downloads to a central electronic platform all information about its products that might be relevant to potential users. The information would be much more fine-grained than that found on Amazon and similar sites today. The webpage describing a prospective new product would also include extensive open discussion of its development, the reasoning behind design choices, any advantages or disadvantages relative to already available goods, reviews of specialists, and so on. A good already in circulation would include undoctored assessments from past users. Individuals would then make commitments to acquire a list of products in the coming period, using ‘points’ they have been socially awarded on various grounds. Based on these preorders producers of final goods would estimate what and

²⁷ Saros 2014.

how much they need to produce. Producers of final goods would then make precommitments to acquire needed inputs from suppliers of intermediate goods and raw materials. In this manner, Saros concludes, a comprehensive plan for intermediate and final production in the society as a whole can be generated directly by those who will use the resulting output to address their needs as consumers and producers. The mediation of markets is avoided without having to resort to bureaucratic planning by state officials.

One major problem with Saros's proposal is that he treats universal goods and particular goods the same. Each distinguishable universal₁ good (he mentions the need to repair a pothole on a given street) must be assigned its place in the extended preference orderings of individuals. In my view, the differences in kind among the three categories of social needs are too profound to treat universal₁ and universal₂ needs the same as particular ones. While trade-offs among them must be made, each general category of need must be addressed in its own right as well.

A second, closely connected, problem is that every adult in Saros's model makes their proposal separately, in a decision procedure all too analogous to the atomistic consumption choices of consumers in capitalism. Information about the goods specific individuals initially want should indeed be collected. That, however, is only one moment in a true democratic determination of social needs. What members of the community initially want for the community as a whole (that is, universal₁ goods) must also be registered, as well as what they initially think is required to meet the basic needs all have in common and the particular goods they initially believe will best address their specific needs. But all of these individual judgements must be critically examined in an extended process of social deliberation that leaves open the possibility of initial preferences being revised after learning about others' perspectives. We should expect social individuals' self-understanding of social needs in general and their own particular needs to be transformed in the deliberations outlined in the previous section. *Sociality in socialism is not the mere aggregation of separate individual choices.*

A third issue concerns the inevitable gap that is sure to arise between the goods people believe can best address their particular needs during the planning process, and their views on this matter at the later point in time when they must use their points. There are many reasons why people might change their minds about what they want from the precommitments made at the beginning of the planning period. If product innovations are made, the new products may promise to address their needs better. Or members of households might have thought they would not want an unfamiliar innovation, but then change their minds after seeing how others have enriched their lives by using it. Or

they may have thought that a product innovation would contribute to carrying out their life plans, but no longer think this after witnessing its use by others. Or perhaps they simply develop new needs as their interests change over time. Further, advances in productivity and reductions of environmental harms do not occur in all sectors at the same rate. The relative social costs of different products will tend to change over time as a result, and this will likely affect social agents' relative preferences. There will also be case where producers' expectation that remaining bugs in announced products can be easily fixed proves optimistic. Or expected advances in scientific-technological knowledge or practical know-how required to complete anticipated product developments may fail to occur.

If we could not adjust our preferences for particular goods, the substantive ability to live the sort of lives we want to live would be weakened over time if not altogether undermined. Rhetorical claims of 'production for social needs' would sound hollow in the face of a lived experience where the products we have to use regularly do not address our present social needs as well as others that are available. In addition, insisting that precommitments be maintained would systematically discourage innovations providing goods better able to aid us live the sorts of lives we have chosen to live. There is an important pragmatic consideration for socialists to consider here too: the systematic failure to produce the household goods people actually wanted played a crucial role in the implosion of so-called state socialism in the twentieth century. A socialism for the twenty-first century must not repeat that failure.

Parallel points hold for the relationship between units of production using inputs produced by other units and the Production Collectives producing those inputs. Here too there may be legitimate reasons for precommitments made by the former to no longer reflect what the users of production inputs actually need from their suppliers at later points in time.

Saros recognises that requests for goods made by individuals, households, other associations, and units of production at the beginning of a planning period may no longer correspond to their particular needs at a later point in the period. He does not treat flexibly evolving needs as if they were forever fixed. However, he also does not throw up his hands and concede that only market societies have the requisite flexibility to respond speedily to shifts in consumer wants. In his model of socialism social agents have the freedom to change their minds about how they allocate their points. In order to minimise disruptions to the initial plan, however, his model provides strong inducements to adhere to precommitments. 'Bonus points' are allocated to those who maintain their precommitments, enabling them to acquire more goods than those who do not.

This is not an adequate response to the above considerations in my view.

A first difficulty with this suggestion concerns the size of the required bonus, left unclear by Saros. Too small, and too few will be willing to acquire goods they no longer prefer, increasing the gap between the goods producers produce and those individuals want to acquire when the time comes. Too high, and those who do not acquire the products they thought they would want to have are in effect significantly penalised for exercising their freedom to change their minds. Saros doesn't talk of penalties, but if the bonus is great enough to have the effect Saros wants, the difference between not receiving a bonus others enjoy and being penalised effectively evaporates. A high bonus would also strongly discourage product innovations between planning periods. It can be difficult enough to get people to try an unfamiliar product. If a penalty for experimenting with the unfamiliar is added, it would become much more difficult still, discouraging the innovative dynamism that is an important part of the socialist project. Further, measures that motivate users to acquire products they do not truly want generate the sort of alienation between producers and the users of their products that Saros's model of socialism is meant to overcome.

This critical assessment of Saros's model of socialism can be generalised to others like it in relevant respects. *Any* form of planning that takes the form of a comprehensive matrix of inputs and outputs meant to hold over an extended period of time raises similar difficulties. Either the plan can remain in force – but then the free choices of users must be restricted or penalised, innovation discouraged, and the relationship between producers and users characterised by a form of alienation. Or those consequences can be avoided at the cost of abandoning the plan. Whether the plan is determined through the radical participatory use of electronic platforms as in Saros, or through the complicated extended iteration process of the parecon ['participatory economics'] model,²⁸ or a socialist planner imitating a Walrasian auctioneer in the market socialism of Lange,²⁹ there is a stark choice between a dynamic innovative society that is oriented to actual social needs and a rigid production framework that cannot adequately cope with the fluidity of particular needs. We can at most hope to have one or the other, but not both.

This stark conclusion, however, refers only to a form of planning aiming at a full matrix including every individual input and every individual output. Another form of planning is possible.

28 See Albert and Hahnel 1991a, 1991b, and Hahnel 2021; for a critical assessment see Schweickart 2006.

29 Lange 1936.

2.2 *A Note on Indicative Planning*

Some needs democratically affirmed in the process described in Section 1 are for specific products. Deliberation in representative bodies and the public at large may reveal that building a bridge or school in a specific place has a high priority in the community. The need to fulfil preorders for specific goods addressing specific universal₂ and particular needs may also be accepted, along with new products that the testimony of social agents and extrapolations from present data suggest will be needed to address social needs in the future. In the vast majority of cases, however, only fairly general categories of needs will be affirmed (for example, a need to expand or replenish the supply of housing stock and furniture in the community). In these cases the specific goods that would address those needs in the coming period are left open.

At the conclusion of the democratic determination of needs we have in effect a plan for the system of production.³⁰ As emphasised above, this is not a plan to implement a full input-output matrix. The planning that underlies the investment process in our model of socialism is closer in important respects to the *indicative planning* of developmental states after World War II than it is to the central planning of so-called state socialism.³¹

In the decades after the war, Japan, West Germany, South Korea, and Taiwan did not rapidly advance to the front ranks of capitalist development by leaving economic development to markets. But neither did that advance occur as a result of implementing a state-imposed comprehensive plan. Planning took the form of setting general priorities for production, investing in units of production with the most promise of fulfilling those priorities, allowing those units of production to determine for themselves how they might best meet the priorities, monitoring their performance, and favouring enterprises that furthered priorities effectively over those that did not. This was not a socialist project, despite quite extensive social planning. The priorities were imposed by the ruling elites of authoritarian states dedicated to capitalist development. Their ultimate purpose was to appropriate more surplus value in the world market than

30 Enterprises running warehouses, delivery services, or sites where the final acquisition of products takes place are incorporated in the system of production in an extended sense. If we take 'production' in a more restricted sense, we would have to refer to 'the system of production and distribution' here. Nothing substantial would be gained by using the more cumbersome full expression.

31 And, I may add, it is different from both the algorithmic-based planning undertaken by giant capitalist corporations today praised by Phillips and Rozworski in *The People's Republic of Walmart* (2019) and the planning in models of platform socialism extrapolated from the algorithmic-based planning of capitalism (see Morozov 2016; Srnicek and Williams 2015).

would occur if matters were left to free trade and the comparative advantages stressed in orthodox economic theory.

The developmental state in these cases gave general instructions to the financial systems to provide enterprises engaged in production with cheap financing, supported by extensive foreign aid and captured domestic savings (savers had no option besides depositing savings in the national financial system, where it could be mobilised for domestic investment). The production system was instructed by government planning agencies to make the investments needed to compete in low 'value added' sectors of the world market. Over time the skills of the workforce were upgraded in a systematic learning-by-doing process, and the sophistication of the technologies employed increased. Domestic capitals were then expected to move up the value chain, producing more sophisticated products capable of winning market share in targeted higher 'value added' sectors. Successful units of production were rewarded with continued access to cheap credit; others were not. In the meantime, a system of universities, research centres, and training facilities were established and instructed to provide firms with the knowledge and pool of knowledge workers necessary to approach the scientific-technical frontier in specific sectors.³² Social needs were a secondary concern, inadequately addressed. The voices of workers were systematically and often violently suppressed.

A necessary background condition for the success of the project was the support of the United States, whose government needed strong and prosperous allies in the Cold War. The US was willing to provide to key allies the funds and technology required to escape the vicious circle described in Chapter 2. The success of the model also depended on being able to export to wealthy regions while protecting nescient domestic firms from both foreign competition and take over by foreign capitals. The United States acquiesced to these conditions. Implementing the developmental state model furthered required domestic capitals that were relatively weak vis-à-vis the state. Where local capitals are strong, they tend to resist state restrictions (as soon as they become strong, they tend to vigorously resist the very restrictions that have nurtured them to strength). The developmental state agenda, finally, was also implemented during a period of rapid expansion in the world market, where opportunities existed that do not exist in a world market characterised by ongoing overaccumulation.

The developmental state model of capitalist development was never generalisable to all places and times. It is now no longer viable.

32 See Westra 2012, pp. 54–60.

China's power to trade access to a cheap and skilled workforce and amply furnished export processing zones in return for technology transfers allowed it to successfully follow a unique path of development, sharing some features of capitalist developmental states and not others. Its successes are also not generalizable. To mention only one factor, the market share won by Chinese companies in so many different sectors has very much limited the space for firms from other regions to advance up the value chain.³³

The limits of indicative planning in contemporary capitalism have far more to do with developments in the capitalist world market than with indicative planning per se. The successes of developmental states in the recent past hold a valuable lesson for socialists: *In the right context an indicative plan can effectively direct production to a social goal without having to specify the full range of inputs units of production must mobilise in the production process or the full range of outputs they must produce.*

The socialist planning recommended here is indicative planning on a far more comprehensive scale than the planning of capitalist developmental states. But it also takes the form of establishing general priorities for production, investing in units of production that have the most promise of fulfilling those priorities, allowing those units of production to determine for themselves the best way of meeting the social priorities set for them, monitoring their performance, and then favouring enterprises that have proven able to further social priorities effectively over those that haven't. Enabling Production Collectives to use their own judgement, their embodied tacit knowledge and local knowledge, to determine the specific objectives and courses of action most appropriate for them gives production for social needs a flexibility it lacks when units of production are instructed to implement a pre-given matrix of inputs and outputs. Collectives can respond quickly to shifts in productive capabilities, product innovations, and the rise of new social needs and new priorities in response. Continuing to implement a comprehensive central plan means either such shifts are ignored (at the cost of lessening the freedom and well-being of producers and users of final products) or allowing deviations from the plan that would soon leave it in shambles.

Taken together the commitments to address democratically determined social needs made in the requests for social funding of the Production Collectives allocated social funds form the content of the indicative plan for the coming period. The remainder of this chapter explores in some detail the formulation of these requests for funding. The allocation process will be examined in the next chapter.

33 Rodrik 2012.

3 The Investment Requests of Production Collectives

Once social needs and priorities among them have been determined prior to the beginning of a period (assumed here to be five years), the members of Worker Collectives engaged in production must consider how they might best contribute to the production of goods addressing those needs over the course of the period.³⁴

Before a unit of production can formulate an investment request its members must consider a series of questions. What social needs could the unit address, given its present technologies and the skills of its members? What are the prospects of developing new technologies and new skills that would enable it to produce goods addressing different social needs? Out of the set of needs that it could potentially help address, which ought to be its main focus in the coming period? Given the technologies and other inputs already in place (or that could be reasonably expected to be acquired in the relevant time frame) and the skills of members (or those that could reasonably be expected to be developed), should the Production Collective concentrate on providing final goods, focus instead on providing necessary inputs to other enterprises, or attempt both? If it operates in networks of production and distribution where it regularly obtains necessary inputs from other units of production, or itself provides inputs for others, should the network be maintained? Should new ones be formed?

In their requests for social funding, units of production may list specific goods they would produce if they were to receive funding, the general paths of product development they would pursue over the course of the period, or some combination of the two. Requests are accompanied by a detailed account of how those specific goods and general paths of development would contribute to addressing a subset of the social needs democratically determined through the processes outlined earlier, along with a self-assessment of the Collective's previous activities, when relevant.

From one perspective, providing this information is not so different from what capitalist firms must do when they raise investment funds from banks and capital markets. Capitalist businesses also must present a strategic plan for the coming period including their present and projected product lines, the

34 Worker Collectives that run warehouses, delivery services, or final acquisition of products are considered here as Production Collectives, taking the production process in an extended sense that concludes only when the product is in the hands of its final users. We could, if we wish, introduce a special category of Worker Collective ('Distribution Collective') without changing any other description of the model.

resources and capabilities they either have or could acquire, and references to past performance. But the differences are significant, beginning with the primary goals of the two types of plans. The primary goal of a capitalist enterprise is the private profits of its investors. In socialism, in contrast, the investment proposals of units of production must make the case that their activities will further a quite different goal, 'the free and full development of every individual'.

In capitalism strategic plans are dictated by managers acting as the agents of an investor class (or, more accurately, managers pursuing their own self-interest while trying to keep major investors content). It is a fundamental principle of republican socialism that self-governance on the level of society as a whole includes self-governance in the workplace. This rules out capitalist production relations, just as it rules out workplaces being told by an authoritarian state planning agency what they must produce and what inputs they must make use of. For self-governance to have material actuality the members of Worker Collectives engaged in production must collectively answer these and other relevant questions themselves.

The direct participation of members in the formation of Production Collectives' plans enables the socialist model to incorporate tacit and local knowledge in a manner top-down centralised planning is unable to do. Knowledge regarding changing technological possibilities and evolving wants and needs often becomes outdated before any central administrator can collect and process that knowledge in decision-making. The informal tacit knowledge present in workplaces is also beyond the reach of central planners. This is the moment of truth in Hayek's contribution to the so-called socialist calculation debate of the twentieth century.³⁵ Hayek's enormous mistake was to assume that only heroic profit-seeking entrepreneurs scattered across the economy are capable of mobilising local and tacit knowledge.³⁶ This assumption is based on ideo-

35 In the first phase of the socialist calculation debate, the relevant concept of prices was taken over from the abstract imaginary prices of a static models of capitalist market economies in an assumed equilibrium state. Lerner and Lange established that through a trial-and-error process a socialist administrator could determine equilibrium prices as effectively as a Walrasian auctioneer. As Hayek was quick to point out, this did not establish that a socialist administrator could establish a coherent set of rational prices in a dynamic setting where local and tacit knowledge play a key role in production and where technologies of production and consumer tastes change in unpredictable ways (Hayek 1935a, 1935b).

36 For Hayek, only a market system where entrepreneurs are free to risk their investments, and consumers are free to decide for themselves what products best address their wants and needs, generate prices conveying the relevant information to economic agents accu-

logy rather than empirical evidence. Worker cooperatives in capitalism have proven capable of accomplishing that essential task.³⁷ There is every reason to think that self-managed Worker Collectives in socialism would be able to mobilise that capability as well and tap into it in when formulating their general production plans for the coming period and when carrying them out later.

Socialism is not a Garden of Eden, where everyone spontaneously and fully knows exactly what the good of society is and what they must do to bring it about. But when the production plans of individual units of production aim at the social good of their community from the start, there is a fundamental break from systematic alienation and dissociated sociality of capitalism.³⁸ Members of Production Collectives actively participating in deliberations and decisions about requests for social investment will develop a deeper understanding of why the unit produces the sorts of products it does, just as those who participate in the process of democratically determining social needs in their local community have a deeper understanding of those needs.

While worker self-governance was given constitutional status in the previous chapter, the particular form it might take was left open. Options for a strategic plan for the coming period could be developed by a Workers Council of elected representatives, or by randomly selected members of the Collective, or by managers either elected by the workforce or appointed by a Workers Council. In all cases self-governance demands that there be a general meeting or meetings of the workforce as a whole to discuss and possibly revise these options, followed by a collective vote to select one. In the course of deliberations about the options, members of the workforce deepen their knowledge of how the enterprise is run.³⁹ When a manager or a Worker Council is delegated

ately and quickly. Only a free market system, in other words, can generate a system of prices flexible enough to convey relevant information regarding the relative costs and benefits of different products and different processes of production. Restricting the freedom of entrepreneurs, Hayek and his followers conclude, dooms the socialist project from the start to horrific inefficiencies.

37 See Pérotin 2012 and Reuten 2023, Chapter 6.

38 'As Marx rightly argues, no society can function without giving a proper consideration to the "economy of time". However, it makes a world of difference whether such consideration is *imposed* upon the society in question by a mechanism that asserts itself behind the backs of the producers (like the objective imperatives of the capitalist exchange relation), or whether the social individuals active in the communal system of production and distribution determine for themselves how they allocate the total *disposable time* of their society in fulfilment of their own needs and aspirations' (Mészáros 1995, p. 764).

39 Lebowitz 2010, p. 73.

authority over the day-to-day running of the enterprise, members become better prepared for a possible term in one of those positions and their capacity to make informed choices and evaluate the performance of those elected is enhanced.

In order to obtain helpful feedback regarding their requests for social investment (and other tasks), Production Collectives should establish Advisory Boards whose members have a wide range of backgrounds. One goal of socialism is to 'internalise' the environmental 'externalities' of production as much as possible from the beginning of the production process. An Advisory Board including environmental activists could help the Collective formulate plans to lessen or avoid environmental damages from production and distribution. Nominations for these Boards could be made by an elected manager or managing Council of Workers, subject to approval of a majority of members.⁴⁰

Funding requests must also refer to the inputs a Production Collective anticipates it will need in the period to come, along with evidence that it could acquire from other Collectives the necessary inputs it cannot (or will not) produce itself. Enterprises capable of producing them if *they* were to receive funding in the coming period could be listed, along with new Production Collectives requesting funding that would likely be able to provide needed inputs. If necessary, Sector Agencies can aid in the construction of these lists, serving as clearing houses for information about the established and projected capabilities of units of production operating or planning to operate in a given

40 Devine (1988, 2019) calls for individual units of production and federations of workplaces operating in the same sector to have Boards of Directors representing various social perspectives. Paul Adler similarly calls for a system where socialist enterprises have 'governing councils' composed of worker representatives as well as community stakeholders to ensure that their outputs benefit all stakeholders (Adler 2019). Unlike these proposals, in the model of republican socialism being developed here the determination of the social needs and priorities among them is not left to individual units of production or a federation of workplaces. There are a number of reasons for this. A Board of Directors or council would have to be unmanageably large to represent all relevant social perspectives in its deliberations. That is unlikely in any particular case, and close to impossible to imagine for all units of production and distribution. This implies that some legitimate perspectives will have more weight than others on Boards. It is also likely that different the Boards of Directors or councils of different units of production and distribution will have different views on the determination of social needs and priorities among them. Resolving such disagreements will eventually have to involve deliberations and decision-making within representative bodies and the community as a whole. Why tax production units and federations of producers with tasks that almost surely will have to be redone elsewhere? It seems better – more appropriate, more efficient – to distinguish the tasks of determining social needs and determining the forms of production to address them, assigning each to structured processes especially suited to them.

sector. By far the strongest case is made when producers and suppliers have engaged in ongoing direct cooperation, sharing knowledge and problem solving in formal and informal social relationships among their members. Marx's description of socialism as an association of producers fully applies to these relationships. When they have been formed requests for social funding for the associated Collectives can be coordinated. The enterprises' self-assessment of their cooperation, including lessons learned from both successes and cases of falling short, can be incorporated in their proposals.

In requests for funding the availability of required inputs is not the only relevant matter. The cost of acquiring them must also be considered. The next section is devoted to this dimension of the model. The intrinsic importance of the topic and its inherent complexity require a fairly lengthy treatment.

4 The Estimation of Costs

4.1 *The Costs of Social Production (and the Shortcomings of 'Prices' in Capitalist Market Societies)*

I do not believe a feasible model of socialism for the twenty-first century can do without investment 'funds', 'income' or 'prices'. In other words, it cannot do without 'money' in some sense of the term. The scare quotes are used (or to be taken as implied) whenever the model is being discussed in order to remind readers that monetary terms are not to be taken in the same sense as, or even similar in the most important respects to, what they mean in market societies. The most important differences will be discussed at length in Chapter 7. The topic of this section concerns one important part of the story, the estimation of a Production Collective's costs in the coming extended period. Before turning to this issue, however, we should step back and consider the question of costs in terms of the socialist project in general.

The present work attempts to develop a socialist model of production for social needs within social forms of self-governance without (personal or impersonal) domination. The part of the model of concern here can be depicted as shown in Figure 6.

The top right of the figure refers to the extended process of democratically determining social needs and the priorities among them on the local level, defined in some cases as needs for specific goods (a bridge, say) but mostly defined in general terms (for example, housing stock in the community might need to be a priority in the coming five years). The members of Production Collectives must then collectively decide the part they can play in addressing these

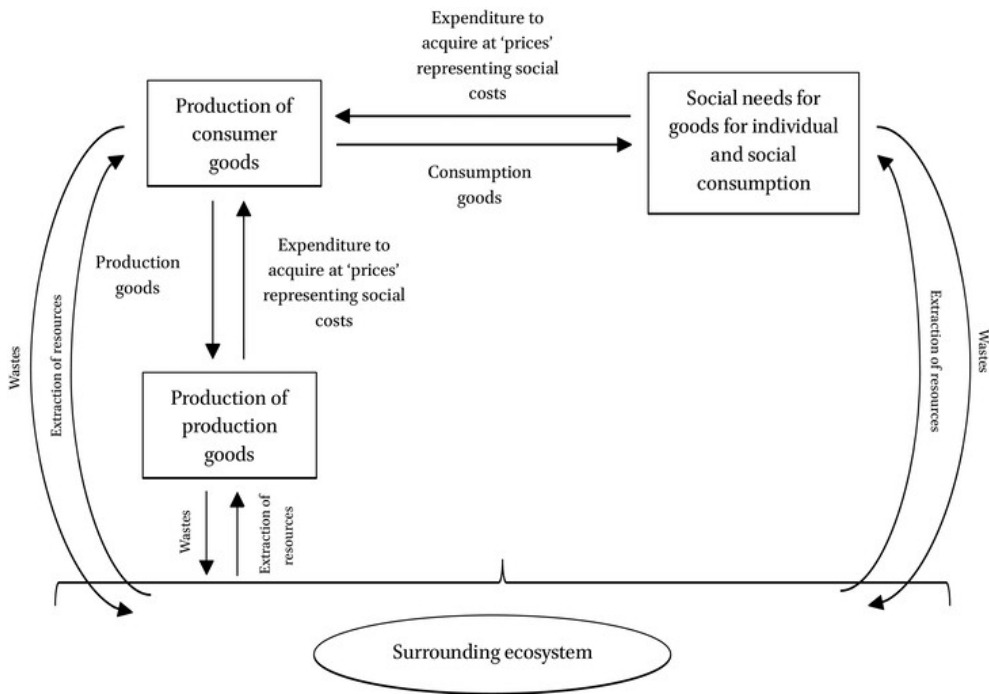


FIGURE 6 Production for social needs

needs. In some cases that will mean making a commitment to provide a specific quantity of a specific good if the Collective receives social funding. In most cases the commitment will be to provide an approximate quantity of a general sort (or sorts) of goods.

Requests for funding in socialism (and subsequent allocations of social funds in response to these requests) cannot abstract from the social costs of providing the goods in question. Socialism could not be considered an advance in world history if tremendous social costs were inflicted in order to address a minor social need to a limited extent. Nor could social rationality be claimed if two units of production addressing more or less the same social needs to the more or less the same extent received more or less the same social funding despite the fact that one did so at twice the social costs of the other. Social rationality demands that foreseeable social costs be taken into account to the greatest feasible extent.

There are three main categories of social costs of production that need to be considered: opportunity costs, environmental costs, and the expenditures of time members of Production Collectives spend in engaged in the labour necessary for social reproduction.

4.1.1 Opportunity Costs

Opportunity costs arise whenever there are limits to what and how much can be produced to address social needs in the given context. Given limited funds for acquisitions, when a specific good is acquired for individual or social consumption, there will be another potentially available good that cannot be acquired. The same point holds for the case under discussion: when a unit of production acquires an input from another unit of production, there will be another input, perhaps from another supplier, that cannot be acquired. Besides cost of acquisition, then, there is also the opportunity cost of the foregone benefits that could have been attained by acquiring a different good.

4.1.2 Environmental Costs

The production and use of products invariably extracts resources from the ecosystem which human society is embedded within and deposits wastes back into that ecosystem. If resources are depleted at the same rate they are replenished and wastes are generated at the same rate they can be processed in the surrounding environment, environmental crises can be averted. This is an essential precondition for 'the full and free development of every individual'. The requirement can only be fulfilled if the foreseeable environmental costs of production and use are taken into account to the greatest feasible extent.

4.1.3 Temporal Costs

Labour necessary to the social reproduction of socialist society is undertaken by the members of Production Collectives. Putting aside for the moment the income members receive in acknowledgment of their social labour, the social cost to be considered here is the time spent in social labour within these Collectives. However creative and fulfilling social labour might become in self-governed workplaces, the time spent in formally organised units of production remains time spent within what Marx termed 'the realm of necessity'. In a society committed to expanding the 'realm of freedom', spending time in socially necessary labour counts as a social cost that must be taken into account. A product whose production requires more worker time than a comparable substitute product has higher social costs than the latter.

An implication of Chapter 2 is that capitalist market prices have never provided an accurate or acceptable measure of costs and benefits. (Chapter 3 shows that this general claim holds with full force in contemporary capitalism.) The opportunity costs (foregone benefits) from systematically neglecting social needs that cannot be addressed through commodities are incalculable, and in any case are not registered by market prices. Social needs that could

be addressed to some extent by commodities remain unaddressed when those with needs lack sufficient purchasing power. The foregone benefits are again immense, and these opportunity costs too are not registered by market prices. The relevance of these considerations for this chapter is simply that the opportunity costs of final products are foregone benefits of the production goods used to make them. Their market prices also fail to adequately account for this important category of social costs.

There are various other ways market prices in contemporary capitalism fail to reflect relative benefits and foregone benefits, relative costs and opportunity costs. Costs that have been socialised (publicly funded research, education and training, infrastructure, direct and indirect subsidies, and so on) are not reflected in market prices, despite their immense importance in determining what benefits can be enjoyed (and by whom) and what must be foregone (and by whom). Neither is there any way of knowing from market prices the foregone benefits from an artificial scarcity politically imposed by the system of intellectual property rights.⁴¹ (Consider the benefits foregone when agricultural plant seeds are the private property of Big Ag firms holding intellectual property rights, as opposed to public goods developed with public research freely available to farmers.) The arbitrary accounting (institutionalised hypocrisy) of accelerated depreciation allowances can be added to the list. These allowances in effect effectively reduce the market costs to producers of long-term fixed investments to zero, even as they continue to allow private profits to be appropriated from their use. That accounting gimmick does not mean that either those benefits or the associated social costs have evaporated.

Regarding environmental costs, matters are equally distorted. The monetary costs to producers of acquiring raw materials are taken into account in market prices. But the long-term costs to humanity and other species of depleting essential natural resources are not. And the long-term costs to human and non-human life prospects from emitting wastes into the atmosphere, the earth, and the oceans are systematically neglected as well, treated as 'externalities'.

Regarding temporal costs to the workforce in formally organised units of capitalist production, the costs incurred by the units from hiring wage labourers are taken into account in market prices. The costs of the alienation inflicted on workers from capital's domination of the labour process are not. Neither are the full costs of the harm to workers' health and psychological well-being res-

41 See Boldren and Levine 2008, Pistor 2019, Chapter 5, and Christophers 2020.

ulting from capital's reign.⁴² The superexploitation of vulnerable workers in global supply chains is similarly rendered invisible in market prices.⁴³

It is not just that wages fail to register the social costs of workers' time spent in production processes. In capitalism there is no intrinsic drive to reduce the time wage labourers spend in the labour process within units of capital. This is an immensely important social cost, whatever the wage rate.

From the standpoint of capitalist rationality, it is rational for a unit of capital to attempt to appropriate returns as quickly as possible. Everything else being equal, the more circuits of capital are compressed in time – that is, the quicker the transformation of the initially invested money capital (M) into a greater monetary return (M') – the more capital can be accumulated over an extended period. This generates a systematic search for innovations and forms of social organisation that lower turnover time, whether by speeding up the production process, decreasing the transportation time of inputs and outputs to sites where they are to be used or sold, minimising the time inventory is stored, increasing the rate of sales, and so on.⁴⁴ The problem, then, is not that capitalism fails to take time into account. The problem is that improvements in labour productivity allowing a unit of output to be produced and distributed in less time are sought so that more of the working period can be devoted to producing surplus value beyond what workers receive back in wages. Advances in labour productivity and innovations lowering turnover time and inventory costs tend to lead to lower unit costs and – to a much lesser extent – lower market prices. But prices in capitalism do not reflect the social costs of surplus labour time extracted from workers, the loss of objectively possible free time at their own disposal. Those costs are reflected in a funhouse mirror that makes surplus labour time appear as a benefit from the standpoint of market prices, taking the social form of healthy profits appropriated by the units of capital.

Given the quantity and importance of relevant information that is not conveyed accurately or at all by the market price system, the assertion that prices efficiently convey all (or even most) relevant information to economic agents is simply false.⁴⁵ Market prices convey the information necessary to keep the profit-driven market system going, reduce much other information to background noise, and condemn the rest to inaudibility.

It would, however, be incorrect to conclude that market prices do not convey any relevant information regarding social cost. Whatever their limits and

42 Holdren 2020.

43 See J. Smith 2016.

44 Marx 1978; Smith 1998, 2000.

45 McNally 1993, pp. 198–203.

distortions, it still might be the case that the information they do convey is essential and cannot be conveyed as effectively by any other means. This brings us back to the question at hand: how are social costs treated in the model of socialism presented in this book?

4.2 *The Direct Concern for Opportunity Costs, Environmental Costs, and Temporal Costs in Republican Socialism*

I shall argue that opportunity costs, environmental costs, and temporal costs of production can all be better taken into account in the institutions and social practices of socialism than in capitalist market societies. The argument will be developed in two steps. The first is to note how all three will be systematically incorporated within the institutions and practices of socialist self-governance directly, that is, without the mediation of any system of pricing. The second step will be to develop a socialist method of pricing that complements the first step, allowing the task of taking social costs into account to be completed. These steps enable Production Collectives to formulate proposals for social funding in the coming extended period that include reasonable estimates of their costs.

4.2.1 Opportunity Costs

The democratic determination of social needs and priorities among them sketched in the beginning of this chapter is an extended discovery process of opportunity costs. The deliberations of Community Activist Groups, Community Associations, Democratic Assemblies, and in public forums establish the relative importance of social needs within and across the main categories of needs in a given place. This is sufficient to give a rough but accurate sense of relative opportunity costs of goods; they are smaller (higher) when they address higher (lower) priority needs at the cost of limiting the production of goods addressing lower (higher) priority needs.⁴⁶ When investment decisions track priorities of social needs, opportunity costs are taken into account in the investment process from the start. The entire framework of production for social needs is designed to ensure that social investment tracks those social priorities. This is in sharp contrast to priorities imposed by the valorisation imperative.

⁴⁶ This assumes goods are of roughly comparable quality. If the model of socialism includes social practices tending to result in similarly high levels of quality, the assumption can be granted. It does.

Production Collectives hoping to obtain investment funding for the coming period must take these opportunity costs into account in their requests. As we shall examine in the following chapter, the Social Investment Centres allocating investment funding must evaluate the strength of their proposals from this perspective, taking into account all available knowledge (including the evaluations of Sector Agencies, Producer Review Boards, and Research Centres). The funds for investment they allot are not unlimited. They are no more and no less than the locality's proportional share. Given that the aggregate amount of investment available is fixed, too much investment in Collectives producing lower-priority goods would cause too little investment to be made in producing goods more needed. In this social context investments in lower priority forms of production disregarding opportunity costs would necessarily tend to immediately call forth a public reaction. Community Activist Groups, Community Associations, Democratic Assemblies, and the socialist judicial system can be expected to continuously monitor the investment process to ensure that opportunity costs are adequately taken into account. The members of these organisations of socialist self-governance both represent those who suffer when opportunity costs are excessively high and are themselves among those who must bear the excessive costs.

After a Production Collective has received funding for the coming period, it has compelling reasons to take opportunity costs into account in its decisions to develop one product line rather than another. If it hopes to receive investment funding for the next period, it must be able to plausibly argue that its past production reflected priorities of social needs.

4.2.2 Environmental Costs

The issue of relative environmental costs of production could hardly be more important to life on this planet. Some forms of production and use deplete more natural resources than others; some generate more wastes than others. Market prices notoriously do not take these differences into account sufficiently. Tragically, that is as true today as it was in the years before the risks to humanity from transformed planetary conditions became clear to anyone willing to consider evidence. This is a political matter if anything is. It is directly dealt as a political matter in two ways in our model of republican socialism.

We can begin by recalling the second solidarity constraint introduced in Chapter 4, according to which local communities are allocated a share proportional to their population of the total environmental footprint from human activity allowing the planet to maintain conditions conducive to human flourishing. Actualising this component of the socialist project is a continuous pro-

cess. Environmental scientists must first reach a consensus based on all available data regarding the acceptable aggregate footprint.⁴⁷ The likely footprint resulting from investments in particular products and processes must then be assessed on the basis of the best available scientific and technological knowledge. The evaluations of specialists working in Research Centres devoted to developing environmental knowledge and its practical implications are crucial here.

We can expect that Worker Collectives engaged in production include members with training in environmental sciences capable of collaborating with environmental Research Centres, since it is in the interest of Production Collectives to internalise the second Solidarity Constraint in their proposals for social funding. These requests must include a reasonable estimate of the environmental footprint generated by the production and consumption of its proposed outputs. If an estimate diverges significantly from the judgements of environmental scientists in independent Research Centres, and no convincing case can be made that the latter are mistaken, the likelihood of receiving social investment also falls sharply.⁴⁸ If the Collective has been in operation in previous periods an environmental audit of its past practices and output will be required before future social investment is forthcoming. If its record is worse than comparable units of production, the likelihood of receiving further social investment also falls sharply.

The environmental footprint of the locality as a whole is limited to its per capita share of the allowable aggregate footprint. Given this constraint, social investment in a producer with a bigger footprint than necessary will unnecessarily limit production addressing social needs in that area. This ensures a systematic tendency for relative environmental costs to be taken into account in allocating funding directly from the start. Responses to requests for social investments by units of production proposing to address the same sorts of social needs will tend to favour units reasonably foreseen to impose a smaller environmental footprint. Investments in units of production that have proposed to address different social needs will tend to favour units with a greater

47 Wackernagel and Beyers 2019 and the work of the Global Footprint Network provide a starting point for environmental scientists in the Research Centres of socialism to build upon.

48 Worker Collectives should engage in formal and informal communication with Research Centres specialising in environmental science as a matter of course. A statement from such a Centre endorsing the estimation of a Collective's proposed future activities could be required in all applications for investment, or it could be submitted independently by a Research Centre.

environmental footprint if and only if the needs they addresses have been democratically determined to have significant priority, and perhaps not even then if the footprint is great enough.

Here, as elsewhere, perfection is unattainable. There will always be uncertainties and disputes in environmental science, as there are in all branches of knowledge. The conclusions of environmental scientists must be revisable on the basis of improved data and better theories. Trade-offs that were made will sometimes prove to have been mistaken.⁴⁹ The claim here is comparative: relevant information regarding environmental costs can be incorporated more directly, more comprehensively, and more rigorously through considering them *ex ante* in the process of requesting and allocating social investments than through market prices.

For requests for investment by Production Collectives to be approved they must cohere with the findings of independent Research Centres devoted to the environmental sciences, whose members have the requisite expertise to anticipate relative environmental costs as accurately as they can be anticipated at the given moment in time. When we consider how markets and the system of market prices have failed to convey the information that needs to be conveyed, the advantages of socialism are overwhelming. This advantage of socialism remains even when the market prices of capitalism are modified by environmental laws, regulations, taxes, or subsidies. That leaves environmental sanity far too much to chance, far too susceptible to the political machinations of polluters and, more deeply, the continuing compulsion for growth in capitalist economies. And it leaves the real political issue unaddressed: are the social needs addressed by a form of production with a relatively large environmental footprint important enough to warrant investment?

The republican socialist model enables the relative environmental costs of incorporating scarce natural resources or harmful environmental consequences to be incorporated from the start and throughout the social investment process.

4.2.3 Costs to Workers of Time Spent in Necessary Social Labour

Time spent in the labour processes of capitalism come at an immense social cost when workplaces are dangerous, the labour process is intensified, workers are subject to the domination of managers, the threat of unemployment is invoked to enforce docility, and so on. These and other aspects of alienation and exploitation in the workplace are directly overcome with workplace self-

49 This is just one reason it is important for the system of Research Centres discussed later in this work to include spaces for heterodox views.

governance. The decisions that affect the quality of worklife are then either made collectively by the members of the workforce as a whole, or by those elected to represent them, directly accountable to those over whom their authority is exercised. The social form of the workplace in socialism transforms the politics of time there as well.

The model of socialism defended here does not presuppose automated production providing universal abundance. There will be a need for the labour necessary for social reproduction to be performed. Nor does it assume that everyone will somehow just know what needs to be done and then spontaneously go about doing it. Units of production will have to be formally organised and their activities coordinated, even if not within a comprehensive plan encompassing all inputs and outputs. There will, in other words, still be a 'realm of necessity' in a system of production for social needs with worker self-governance. But when the valorisation imperative for M to become M' is put out of play and those with authority in the workplace are the agents of those over whom the authority is exercised, the workplace will be structured to enhance the 'full and free development' of every worker. This involves work that is meaningful; creatively cooperating to provide goods addressing democratically determined universal₁, universal₂ and particular needs is meaningful. It involves as well increasing liberation over time from the labour necessary for the material reproduction of the society, actualising the freedom to pursue projects that aren't strictly necessary but are interesting, fun, challenging, enjoyable, relaxing, and often of immense import for the well-being of others, undertaken in free associations with others sharing the same interests.

In the social relations of republican socialism, productivity gains will over time systematically tend to reduce the temporal costs to workers in Production Collectives, that is, the time foregone to activity in the realm of freedom. This is not only a tendency immanent in workplace relations. It is a constitutional commitment of republican socialism, a core feature of the socialist project. All the institutions of socialist self-governance (Democratic Assemblies, Sector Agencies, Research Centres, Social Investment Centres, etc.) are tasked with helping to expand the realm of freedom.

Once again, the claim here is not that every decision made in socialism would be optimal. There is a trade-off between using productivity advances to expand production of goods addressing social needs and expanding the realm of freedom (which is itself a special sort of social need). There are no guarantees the trade-offs will always be made in the best way, all things considered. The claim here is simply that the socialist model is able to take the temporal costs of production into account more adequately and more comprehensively than a profit-driven system.

Here, as in the discussions of opportunity costs and environmental costs, the case for republican socialism is based on the manner social costs are comprehensively accounted for within the institutions and practices of socialist self-governance directly, that is, without the mediation of market prices. In republican socialism the social costs of production will tend to be seriously taken into account from the moment when Production Collectives begin to deliberate about requests for social investment. Their members know that requests for social investment are more likely to be evaluated favourably if their proposed plans for production result in high rather than low priority goods, a smaller rather than larger environmental footprint, and promise to contribute to a social world where less rather than more direct and indirect labour time must be devoted to formally organised production in the 'realm of necessity'. In their deliberations and decisions, the members of Production Collectives will therefore tend to favour proposals that take these important categories of social cost into account.

The information relevant to estimating the relative costs of means of production, the assessments of that information, and the decisions based on those assessments are all inherently political matters. All involve trade-offs of qualitatively incommensurable factors. Leaving the inevitable trade-offs to the aggregate results of quantitative comparisons of relative market prices by profit-driven private investors treats them as if they were private matters, but that does not make them private matters. Using market prices that reduce the qualitative and incommensurable factors to homogenous quantitative units does not make them homogenous quantities. *Pace* Hayek, this process does not transmit the relevant information efficiently; it *removes* much of the most relevant information. Relative costs are real and must be taken into account. It does not follow that a system of relative market prices is the best way to do this. It is far better to take relative costs into account directly and explicitly in proposals for social investment and in the allocation of investment funds.

These considerations are crucial when we compare how social costs are treated in capitalism and in the socialist alternative presented here. They do not, however, provide an answer the question we began with. Requests for social investment must include an estimate of the funds that will be required in order to acquire needed means of production from other Production Collectives. Having social costs taken into account in the requests for social funding does not provide this estimate. Of course, the 'costs' of acquiring those inputs is identical to the 'prices' charged by their suppliers, but this tautology does not get us anywhere beyond the question how these prices are determined in the model.

4.3 *Determination of the 'Prices' of Inputs*

In the model of socialism developed here, decisions regarding the inputs Production Collectives use in the production process – raw materials, partially finished goods, and long-term fixed means of production (machine systems, physical plant, and so on) – and the suppliers they obtain those inputs from, are decentralised, made by the Collectives themselves mobilising the tacit and local knowledge of their members.⁵⁰ Requests by Production Collectives for social funding must include an estimate of the expenditures that will have to be made to acquire necessary inputs from other Collectives in the coming period (in other words, the 'prices' of those inputs). These prices are in turn a function of the costs of the Collectives supplying the inputs, which are a function of the prices and costs of *their* suppliers, and so on.

We know the social costs that matter: opportunity costs, environmental costs, the temporal costs of labour necessary for social reproduction. One of the most challenging tasks of a model of socialism is to incorporate a system of accounting prices that adequately reflects relative social costs while avoiding the fatal flaws of the pricing system of market societies. This includes the costs of production goods; the Production Collectives deciding which inputs to acquire must explicitly take into account the social costs of their production and use. Even if the social forms and processes described in the previous subsection tend to address social costs effectively over time, it does not follow that every production good will have the same opportunity cost, the same environmental cost, the same temporal cost. It would be socially irrational if an input that imposed twice the social costs of another could be acquired at the same 'price'.

4.3.1 Opportunity Costs

This is perhaps the most straightforward social cost to deal with. As long as there is some accounting system tracking transactions where expenditures of units of account are used to acquire goods (in the case at hand, production goods used as inputs) there is evidence of how those who made the acquisitions estimated their opportunity costs. If a good is acquired at a given price, that is a sign that they regarded the opportunity cost of acquiring as relatively low. If it is not acquired at a given price, that is evidence they considered the opportunity cost of acquiring too high.

⁵⁰ Similarly, individuals and representatives of communities decide on the individual and social consumption goods they acquire to address their needs (see Chapter 6, Section 3 below).

As we shall soon see, in the version of socialism advocated here, the price represents the two other main social costs of its production and use. Once that price has been determined (see below), the balance sheet for a Production Collective supplying production goods to other Collectives provides objective evidence for judgements regarding the opportunity costs of its output. If its aggregate output of a product is acquired at prices reflecting environmental and labour time costs, that suggests the opportunity costs are relatively acceptable. If the expenditures to acquire the product do not cover those costs, then the opportunity costs of acquisition are too high. In the case we are considering here, the expenditures of other Collectives with respect to a production input provide direct feedback to the producer of the production goods regarding the opportunity costs of its output.

Even when its output is acquired a unit of production still must consider introducing process and product innovations as they become available. If it does not, its prospects of receiving social funding in the next period lessen. When much of its output is not acquired more extreme measures are required. Immediate steps need to be taken to either lower the social costs represented in the prices of its products, thereby lowering the opportunity costs of acquiring them, or it must immediately begin the process of introducing different sorts of products that promise to better address the social needs it has made a commitment to address. Balance sheets are a matter of public record, open to inspection by anyone or any group at any time.⁵¹ If they reflect excessively high opportunity costs of a Collective's output, that cannot be kept a secret. If a promising response to excessively high opportunity costs is not made relatively quickly, that too will be a public matter.

The question now is how a price representing the other major categories of social costs can be determined in a social world refusing to leave price determination to market forces (modified by whatever taxes and subsidies the balance of forces in the state contingently allow). In the case at hand, the real challenge is to determine the other dimension of the relative costs of producing means of production. It helps greatly that the environmental costs and temporal costs of extracting raw materials and producing partially finished goods and fixed means of production (machine systems, physical plant, and so on) are systematically taken into account prior to production and use in the requests for social funding and subsequent decisions regarding the allocation of funds. But these costs must still be represented in the prices of production inputs.

51 The balance sheets are of special interest to Social Investment Centres in the annual reviews of Production Collectives that have received social funding. These reviews are described in the following chapter.

4.3.2 Environmental Costs

We begin with the proposals for representing the environmental costs of using raw materials:

* Set the environmental cost of using a raw material abundantly available and indefinitely renewable at zero.

* Order other raw materials into broad categories of increasingly greater environmental harms, based on the best available scientific knowledge of the short, medium, and long-term environmental consequences of extracting and using the raw materials in each category.⁵² (The task is undertaken by Research Centres devoted to environmental sciences.⁵³)

* Assign numbers to each category such that raw materials whose extraction and use have relatively small foreseeable effects are assigned a relatively smaller number while those whose extraction and use have greater negative environmental effects are assigned a higher one. The specific numerical units do not matter, so long as there is consistency across the social world and the relative distances between them track the available scientific evidence.⁵⁴

Ultimate precision down to the last decimal point is not necessary. So long as a natural resource whose extraction and use effects planetary states much less than another is 'priced' at a correspondingly small fraction of the other, that will suffice.

The 'prices' of other means of production must also reflect the relative environmental costs of producing them. Here too we can begin with an ordering of them into a set of categories of increasingly greater environmental costs of producing and using them, based again on the best available scientific know-

52 As elsewhere in this work, environmental 'harms' are defined relative to planetary states conducive to human flourishing.

53 We must recognise, of course, that all claims to scientific knowledge are contestable and revisable, and that scientific endeavours in the past and present have been profoundly distorted by socio-political factors. These are not, however, sufficient reasons for dismissing all scientific claims. They are reasons to embed science within a social framework where distorting factors are minimised to the greatest feasible extent.

54 Since the socialist project is inherently internationalist, the number system must accordingly be set by international Research Centres and affirmed by the international Democratic Assembly (both discussed below).

ledge of Research Centres specialising in the environmental sciences. Here too a number is then assigned to each category by these international Research Centres.

Further steps are needed:

* A Production Collective estimates the environmental footprint of its production process for each sort of product it will produce, adding up the costs of raw materials used, other production goods, and its own production processes, while taking into account the quantities it plans to deliver in the coming extended period. (The footprint of shorter product runs and longer-runs will generally differ considerably.) An estimate of the per unit footprint can then be made.

* A Research Centre charged with estimating the environmental footprint of activity in a given locality calculates the total environmental footprint of production and use of the given product in the area. The Collective's estimate of environmental impact must refer to this research. A Centre may recommend revising the Collective's estimate of the environmental costs if it feels the evidence warrants.

* If the local Production Collective does not agree with the Research Centre's estimate, the Collective can appeal the decision to a panel selected by the local Democratic Assembly from members of the relevant Sector Agencies (that is, other workers from the sector in question) and other Research Centres specialising in the measurement of environmental footprints.

* A number is assigned such that products whose production and use have relatively small effects are assigned a relatively smaller number while those whose extraction and use have greater negative environmental effects are assigned a higher one. The specific numerical units do not matter, so long as there is consistency across the social world and the relative distances between them roughly correspond to the scientific evidence.

The goal here is to mobilise the local and tacit knowledge of the members of Production Collectives producing a type of productive input and combine it with relevant available data collected and processed by environmental scientists charged with measuring the environmental footprint of our activities. Once set, prices in this model are not immutably fixed. They can be adjusted when new data and better theories show that adjustment is warranted in the course of the annual reviews described in the next chapter.

The greater the diversity of a unit of production's product offerings, the greater the burden of its members to estimate the environmental footprint of their production processes. The more products produced in the area, the greater the burden on Research Centres to estimate the aggregate environmental footprint of their production and use. It is reasonable to ask if Production Collectives and Research Centres would be overloaded by these responsibilities. An important contrast between capitalism and socialism is important to keep in mind when considering this question. In capitalist market societies companies have a strong motive to introduce products that are not substantially different from those that have already proven profitable, attempting to capture market share through advertising. The proliferation of insignificantly different products does not advance production for social needs. There is no corporate advertising in socialism, and no Production Collective is rewarded for production that does not result in social needs being addressed more adequately than they would have been without it. As a result, there are significantly fewer products to assess, strengthening the case for the feasibility of the above method of determining environmental costs. It is also the case that in the socialist model there is nothing analogous to the dominant tendency to the concentration and centralisation of capital. There are no vast conglomerates resulting from extensive mergers and acquisitions. It follows that a single unit will not produce a vast range of divergent products. With units of production concentrating on a relatively small range of products, the case against the feasibility of the above method of determining costs becomes much weaker.

It is also worth noting that the members of Collectives have every reason to 'price' their costs accurately. They hope to receive social investment funds, and if their projected costs are considered unreasonable those hopes are not likely to be fulfilled. And as we are about to discuss, the members of a Collective have no personal material incentive to either exaggerate or underestimate their estimates of costs in the coming period. The income of members is not affected one way or the other by these estimates of the costs of production.

This gives us one component of the price of a production input, bringing us one step closer to explaining how requests for social funding can include estimates of expenditures Collectives must make to acquire needed raw materials and production goods from their suppliers. We now turn to the next step.

4.3.3 Costs of Workers' Time

In a solidarity society an hour of my time cannot be considered more important to me than an hour of yours is to you. One form of socially necessary labour

is as much social labour as another; no one should be systematically disadvantaged by the mere fact that they contribute to one type of labour necessary to social reproduction rather than another. This is why the republican constitution sketched in Chapter 4 affirms that all forms of contributing to necessary social labour must be equally socially acknowledged.⁵⁵

The conclusion to be drawn in the present context is that in a solidarity society an hour of one person's labour within formal organisations (Production Collectives) should *prima facie* be socially valued the same as another's within these organisations. This does not necessarily mean that every member of every Collective must receive the same income. *Prima facie* claims hold when everything else remains equal, and all things may not be equal in a specific context. But that is for the members of a particular Collective to decide for themselves collectively in their concrete circumstances, within limits set by demands of solidarity. It is not a judgement to be made on the abstract level of a model of socialism. (Although we can say on the abstract level that a solidarity society is furthered when more onerous forms of work and more enriching forms are both widely shared rather than concentrated in different sets of workers. And we can affirm that if enriching forms of work require specialisation, the enrichment is a reward in itself. To receive greater income is to be rewarded twice for the same activity.)

This suggests a process like the following for determining this component of the costs of production:

* The average income from contributing to social labour in Worker Collectives will be proposed by the international Social Transaction Centre, subject to approval by the international Democratic Assembly.⁵⁶

* Once the average annual income of members of Collectives has been set, they can estimate this component of their costs by multiplying that average by the number of full time (or full time equivalent) members anticipated in the coming period.⁵⁷

55 An eloquent defence of this principle is found in Hudis 2013.

56 Determining average worker income on the international level (along with the two solidarity constraints) overcomes the systematic disparities in living standards found in the capitalist world market. (See Chapter 9 below.)

57 If they wish, the members of a Production Collective could democratically decide to break up some full-time positions into a number of part-time ones, and to provide some members with more or less of average income.

Accordingly, funds are allocated to Collectives to cover the costs of providing income to their members in direct proportion to the number of their members.

Most adults of working age will receive most of the income they devote to acquiring the particular goods they need (and universal₂ goods acquired in the same way as particular goods) from membership in Worker Collectives. The average income in socialism must take the prices of those consumption goods into account, just as their prices depend in part on the income allocated to members of Production Collectives. These complications can be left to the side here. Approximating the proper balance is a technical matter in itself that does not involve political questions. It can therefore be left to technical specialists (members of the Social Transaction Centre) making use of information technologies collecting and processing the relevant data.

When environmental costs were considered, the number representing the relative environmental footprint of a product was one component of its price, and therefore a determinate of the funds a Production Collective needing to acquire the input must request. How does the request for social funds for the income of the members of a Production Collective relate to the 'prices' of its outputs? From the standpoint of the social costs of time spent labouring in the formally organised Worker Collectives of the realm of necessity, what matters is not the income the members of Collectives receive, but the amount of labour time devoted to producing a specific output. Since some production processes involve less direct and indirect labour than others, we cannot relate the prices of resulting products to the funds providing income to members of Production Collectives; the latter does not necessarily correspond to the former.

The following procedure does generate a result that corresponds:

- * The members of each Production Collective directly measure their time spent in the production process.

- * When a production process makes use of inputs from suppliers, the time they estimate was spent in the extraction and production of those inputs is assigned a number in the same numerical system as that used to fix relative environmental costs, with products involving more direct and indirect social labour being assigned a higher number compared to those involving less.

- * Sector Agencies and certain Research Centres are charged with collecting information on the direct and indirect labour times spent in producing different products. Collectives' estimates must refer to this work. Agencies and Centres can recommend that estimates be revised. If a Col-

lective disagrees with a recommendation it can appeal to a panel selected by the local Democratic Assembly from members of the relevant Sector Agencies (that is, other workers from the sector in question) and other Research Centres specialising in the measurement of direct and indirect labour time in production.

What matters here is the concrete labour time that concrete human beings spend out of the one life that they have, not the abstract labour of capitalism represented in an abstract property ('value') of commodities. There is no need to reduce complex labour to units of simple labour, since the workplaces of a solidarity society will attempt to balance less and more attractive job components whenever feasible, and when this is not feasible those specialising in more rewarding (creative, fulfilling) occupations are already rewarded by fulfilling creative work.

Are there other costs that need to be incorporated in the 'price' of output? There is no class of private investors said by ideologues to bear the cost of risking their wealth and the cost of foregone consumption while waiting for a return on their investments. The risks of social investment that do not deliver on their promises and the costs of foregone consumption today in order to invest in productive capacity to use tomorrow are socialised in socialism. There is no need to build into socialist 'prices' an additional component that would compensate investors for their risk-taking and waiting. The costs that need to be represented in the prices required to acquire products are the two that have been considered, environmental costs and the cost of devoting time to labour socially necessary for the material reproduction of the society.⁵⁸ When the social costs of producing means of production have been fixed in these two dimensions, so are their prices.⁵⁹ There is a social surplus in socialism, but it does not take the form of a component of the cost price. (I come back to this important point in the next sub-section.)

58 In superficial respects, there is an analogy with the cost prices in capitalism discussed by Marx. The disanalogies are much more striking; environmental costs are not like the costs units of capital must pay to acquire means of production (constant capital, *c*) from other units of capital, and the direct and indirect labour time spent in production is not at all the same as the costs of purchasing variable capital (*v*), that is, the very special commodity, labour power. Further, in the socialist 'price' proposed here, there is no additional term analogous in any respect to the '*s*' (surplus value) that is added to *c+v* in capitalism, whether directly or after a 'transformation' of some sort or other. (A comprehensive treatment of the 'transformation problem' just alluded to is found in Moseley 2015.) In this model of socialism, neither means of production nor the labour power of the workforce are in the social form of moments of capital in its process of valorisation, and neither are measured by capitalist market prices.

59 Cockshott and Cottrell are the most prominent defenders of pricing in terms of

Suppose a 0–100 scale is used to represent different environmental footprints and different amounts of direct and indirect labour time. Then the price of an input relatively low in both categories of cost (assigned, say, a score of 10 for both) would require a lower expenditure to acquire than an input that was assigned a much higher number (80, say) for both categories. In an easy case they are substitute products, with the difference in costs reflecting innovations lowering environmental costs and labour time made by one Collective and not the other. If comparable inputs cost 20 units in one case and 160 in the other, Production Collectives will select the former as their supplier. That would free up funds that could then be devoted to expanding production for social needs, thereby increasing the chance of receiving social investment again in the next extended period.

In other cases, matters will not be as clear cut. Two inputs that are substitutes for each other might be priced the same, but with one having relatively high environmental costs but requiring little time spent in production, and the other the reverse. I do not see this as a problem for two reasons. First, reducing environmental harms and lessening the time spent engaged in labour necessary to the social reproduction are both profound goals of the socialist project. Both must be taken into account in decisions about acquisition and use. Using the same scale to represent relative costs in both dimensions, and then simply adding the results without giving special weight to one dimension or the other, seems an appropriate expression of the depth of the socialist commitment to each. Second, while a price of 90, could equally represent a 10 score in relative environmental cost and an 80 for labour time and an inverse 80/10 combination, the different reasons for the same score are a matter of public record. This means that while the two states of affairs might give out the same signal with respect to acquisitions of inputs in the present, they give quite different signals for future paths of development. A high score in the dimension of environmental footprint is a strong signal for Research Centres to seek innovations that would allow the given social need to be met at a lower environmental cost, while a high score in the dimension of labour time in production would signal a

labour hours. But they concede that prices will have to be modified by environmental considerations (Cockshott and Cottrell 1993, Chapter 5). Given that this is the case, and that environmental costs are not the only costs relevant to socialist pricing, it should be admitted from the start that calculating prices solely in terms of labour hours is inadequate. An approach exclusively concerned with lowering environmental harms and indifferent to the proportion of human life devoted to necessary labour would be equally unacceptable in a society whose ruling principle is 'the full and free development of every individual'.

need a seek innovations to improve labour productivity. Both signals would in this case be given with the same intensity. Over time matters can be expected to improve in both dimensions, even when the differences are sometimes hidden by the price form.

We can now finally return to the question that was left hanging above. The members of a Production Collective must come to a collective agreement about its request for social funding in the coming extended period. The request has two parts. They must commit to producing goods and services that effectively address a subset of democratically determined needs in the course of the period if they receive social funding, with 'effectively' referring to reasonable quantities of reasonable quality (with both spelled out as much as possible). The second part of the request is an estimate of the social funds that would be required to fulfil that commitment. The latter can in turn be broken down into two parts.

First, there is the income for members of the Collective over the coming period. The members of the Collective must make a good faith attempt to anticipate whether a commitment to provide the products they intend to provide at the quantities they intend will require the number of members to stay approximately the same, be increased, or decrease. They then multiply the number they have selected by the average wage, and then multiply the result by five to estimate the income members would receive over the five-year period.

The second component is a good faith effort to anticipate the funds required to acquire needed inputs from other Collectives supplying them. The costs of acquiring them are identical their prices. In the model here, these are cost prices. They are not market prices, which do not adequately represent the social costs of production that matter in a socialist society. Opportunity costs, environmental costs, and the cost of time needing to be devoted to socially necessary labour are what matter.

Environmental costs are represented in the cost price by a number based on state-of-the-art scientific understanding of the environmental impact of producing and using the given product. The temporal costs of production are represented by a number expressing the relative amount of direct and indirect concrete labour required to produce a given unit of the product in question. These two numbers are then added to determine the cost price of acquiring the product.

A balance sheet tracking transactions will show the relationship between the costs of production measured in the units of account used throughout the socialist world and the amount of those units used to acquire the resulting products. If they approximately balance, that is a sign the opportunity costs of

acquiring the product are not excessively high.⁶⁰ Opportunity costs can then be taken into account by Production Collectives in response to the feedback provided in the accounting balance sheets.

There are undoubtedly a host of complications in working out a price system along these lines, many difficult to resolve. There is no reason to think they cannot be dealt with.⁶¹ Once a price system along these lines is established, all Collectives intending to request investment funds to supply inputs to other units of production must make public their estimates of the social costs of producing those inputs, which, again, is identical to the 'prices' of acquiring them. Production Collectives are now in a position to make a good faith estimate of the funds they will need to obtain necessary inputs in the coming period. When this figure is added to the funds required to provide income for their members, they are able to draft their requests for social investment, along with an explanation of the reasoning behind their estimates.

Initial drafts of requests are then submitted to the relevant Sector Agencies for feedback. Sector Agencies are institutions of self-governance whose members are workers from the same sector in the national economy who have won the respect of their co-workers. With access to all available information regarding every unit of production operating in a given sector, they are in a position to judge the plausibility of a unit of production's estimation of its future costs. They can, for example, flag the apparent inconsistency of two production processes that result in products of apparently comparable environmental and labour time costs where one has been priced as if its social costs of production were significantly lower. This would have been a hopelessly complex task just a few years ago. Contemporary information technologies now make it a relatively simple matter to collect and process the data required in order to detect the cases that warrant attention. The members of the Sector Agencies can then suggest revisions of the estimations of a Production Collective's costs. In a similar manner, a Research Centre specialising in environmental assessments can

60 The balance does not reveal whether the level of production was more or less appropriate to the social need for the product in question or whether expanded production would be warranted. The forecasting of Big Data technologies and the results of surveys provide clues to the answer. At the end of the day, trial and error will most likely play some role.

61 We cannot overlook the profound difficulties in capitalist pricing systems that are covered over by facile talk of supply and demand. Any accounting textbook will reveal an astonishing number of important matters that are dealt with in balance sheets by invoking more or less arbitrary accounting conventions. No doubt many issues in a socialist pricing system will have to be resolved by establishing conventions. The process of establishing them in socialism will not be distorted by lobbying for conventions enabling profits to be hidden or calculated higher (depending on corporate strategies).

provide critical feedback to a Production Collective's estimate of the environmental costs that will be imposed by its activities if it receives social funding.

Another source of feedback emerges from the transparency of the pricing process in this model of socialism. All Collectives are under a mandate to 'open their books', that is, publicly reveal their estimation of costs and the reasoning behind it. The mandate also includes opening their operations to inspection by those with a legitimate interest in them. Horizontal cooperating among Collectives is encouraged, implying that every Collective that may cooperate with another in a supply chain has a legitimate interest in the other's operations. Suppose a Production Collective is considering making use of a supplier in the coming period but has questions about the prices it anticipates will be set for the inputs it will need to acquire. The reasoning and evidence behind the supplier's prices are public matters. The Collective intending to make use of the supplier's output may request that the relevant Sector Agency and environmental Research Centre confirm the supplier's estimate of its costs. And it has a right to investigate the supplier's operations to see how and where those costs arise and the steps that might be taken to lower them. If a Collective has concerns about another's pricing, they can be added to any concerns the relevant Sector Agency and Research Centre (or any organisation or association, for that matter) might have that are forwarded to Social Investment Centres prior to the latter's decisions about the allocation of social funds.⁶²

In a final step Production Collectives have the opportunity to revise their initial estimates of their costs of production, taking into account any feedback they may have received. If recommended revisions are not made, the request for social investment will have to explain why. If revisions are made, that information can be transmitted to the Collectives who anticipate using their products, enabling them to revise their estimate of the costs of acquiring them in their proposals for social funding. Information technologies allow these adjustments to be made quickly.

62 A similar state of affairs holds for Production Collectives producing consumer goods for individuals, households, other associations, or communities. If Community Activist Groups or Community Associations representing the latter have questions about the prices that must be met order to acquire goods to address community or individual needs, they have a right to be informed of the reasoning that led the final producer to propose those 'prices', that is, a right to investigate the producer's costs. And they have a right to investigate the final producer's operations to see how and where those costs arise. If they have concerns that are not addressed to their satisfaction, they can inform the relevant Sector Agency and Social Investment Centres, potentially affecting the Collective's prospects for social funding.

It is time to bring this long section to a close. For a socialist alternative to market capitalist societies to count as a true advance in world history, relative social costs of production must be taken into account far better than the market prices of capitalism are able to do. The republican socialism defended here counts as an advance from this perspective. It takes the qualitative and heterogenous matters intrinsic to relative social costs as the political matters they are, rather than hiding the politics beneath homogenous quantitative market prices.⁶³ It does not rely on the proper adjustments to market prices being made through state taxes and subsidies decided upon in processes invariably distorted by concentrations of market power, the contingencies of party politics, and the valorisation imperative that dominates capitalist societies. Various aspects of the institutional framework of republican socialism ensure that relative social costs are considered in a more comprehensive fashion from the start and in every moment of the process of producing for social needs.

* The process of defining social needs and the priorities among them outlined in section 1 is in effect a community-wide process of determining the opportunity costs of different paths of production. Allocations of social investment track the results of that process, prioritising the funding of units of production that promise to meet needs of higher priority over those addressing lower priorities needs. Production Collectives hoping to receive social funding will internalise the relative opportunity costs revealed in the democratic determination of social needs in their requests for social investment for the coming period (and in the forms of production they undertake in the course of that period if they wish to be funded again in the future.)

* The socialist accounting balance sheets documenting the costs of social production undertaken by Production Collectives supplying inputs and the extent other Collectives have used social funds allocated to them to acquire those inputs provide important quantitative evidence regarding the opportunity costs of producing specific products, complementing the quantitative and qualitative assessments made by Sector Agencies, Research Centres, Community Activist Groups, Community Associations, and other organisations concerned with production in a given sector. (The socialist balance sheets of Production Collectives producing final

63 The importance of balancing qualitative and quantitative dimensions of production for social needs is rightly emphasised in Laibman 2022 and Tremblay-Pepin 2022.

goods for individual and social consumption similarly provide evidence of the opportunity costs of producing those specific sorts of goods.)

* Allocations of social funding for production must also take into account the second solidarity constraint, which allows every local community no more than its per capita share of an environmental footprint reasonably foreseen (on the basis of present scientific-technological knowledge) to be consistent with maintaining planetary conditions conducive to human flourishing. Production Collectives hoping to receive social funding will internalise the relative environmental costs as assessed by Research Centres specialising in the environmental sciences in their requests for social investment for the coming period (and in the forms of production they undertake in the course of that period if they wish to be funded again in the future.)

* Capitalism's systematic bias against reductions of time workers spend in the realm of necessity is overcome in republican socialism. All components of the system of socialist self-governance are charged with making the abstract constitutional commitment to a different politics of time a concrete material actuality. Most importantly, worker self-governance in Production Collectives – and the corresponding absence of a class of owners/investors who benefit from the surplus labour of others and managers who are the agents of that class – ensure that over time advances in labour productivity tend to emancipate workers from time spent in labour socially necessary for the material reproduction of the society more quickly and consistently than any variant of market capitalism would.⁶⁴

* The 'prices' of acquiring production goods (as well as goods for individual and social consumption) represent a combination of environmental costs and the direct and indirect labour time, calculated on the basis of the relevant data and the best available scientific frameworks for interpreting that data. Higher (lower) prices directly reflect higher (lower) social costs in these two dimensions.

64 Once a decent standard of living has been generalised, a general decline in the length of the work time in formal organisations in the socialist world will track the general advance in labour productivity. The timing and extent of the decline is set by the international Democratic Assembly (see Chapter 9, Section 5.2 below).

Estimating environmental and temporal social costs will often involve complex and contestable judgements. Many issues will have to be resolved through adopting social conventions, and it is will not always be obvious to all what the most reasonable conventions are. Revisions will regularly have to be made on the basis of new data and better theories. It is worth stressing once again that we are not seeking an impossible precision. Throughout the process of production for social needs there is one fundamental question: 'Given the relative social costs of producing this product, does the relative priority of addressing the social needs the product addresses make it worth the costs?' It bears repeating that this is a normative question, a political question. It is not a question that can be adequately answered by comparing the quantitative differences between the monetary costs of private investment in production and the anticipated monetary returns that can be privately appropriated from sale of the produced output, with other matters dismissed as 'externalities' that may or may not be addressed through laws, regulations, taxes, or subsidies.⁶⁵ As long as price estimates fall within a reasonable range, with 'reasonable' defined in terms of what is necessary for effective production for social needs, while incorporating significantly more than the exceedingly narrow range of information conveyed by capitalist market prices, that is good enough to accomplish what needs to be accomplished.⁶⁶

The stunted transmission of partial and distorted information through market prices does have one advantage over the socialist practices described above: speed. Price signals can be transmitted and modified in capitalist markets more quickly than the decision processes described here. No mode of production could possibly accelerate capitalism's hypertemporality, imposed by the drive to make as much profit as possible as fast as possible. If that were the proper measure of a successful society, then capitalism and its pricing system could not be surpassed. But it is not the proper measure.⁶⁷

Change for change's sake is not the proper end of social life, and neither is change for capital's sake. No plausible case can be made that the 'full and free development of every individual' is served by the fastest possible rate of change. Far better to have a decision process that heightens the likelihood

65 See Mészáros's discussion of the important difference between 'socialist accountancy' and 'capitalist accountancy' in *Beyond Capital* (1995, pp. 816–19).

66 It is worth noting in passing how different the pricing system proposed here is from administrative prices set by central authorities. The process described above would not have the inflexibility and arbitrariness that distort centralised set prices. It is a system of negotiated coordination similar to Pat Devine's, but with a wider range of social voices and without Devine's residue of market prices.

67 See Cray 2014.

that its results reliably further human freedom and well-being, even if it takes somewhat more time to unfold. Today, when the environmental costs of capitalism's hypertemporality have are themselves rapidly accelerating, the urgency of decelerating social temporality should be evident.⁶⁸

With a pricing system in place we are now in a position to go on to consider the next moments in the structured process of production for social needs, the consideration of requests for social funding and the subsequent allocations. Before turning to these topics in the following chapter, however, a striking point of contrast with market socialist models warrants some discussion.

5 Retained Earnings and Market Socialism

In market socialism, as in all market societies, most investments made by enterprises are funded out of retained earnings. This arrangement is defended on the grounds that this mobilises tacit and local knowledge relevant to investment decisions. In market socialism, as in all market societies, retained earnings are also a source of income for members of the enterprise. Market socialists argue that the serious motivation problems that beset so-called state socialism can be avoided when retained earnings from successful investments allow members of a unit of production to win income gains.⁶⁹

These are not unreasonable points. But they are not decisive.

Relative to its individual members, a Worker Collective is, as the name implies, a community. It unites members in their differences in a form of concrete universality, to use Hegelian jargon. A given Collective, however, is also a particular enterprise within the higher-order unity of a more extensive community. While it is immensely important in socialism for particular Collectives and their individual members to flourish, it is no less important that the higher-order social good of the wider community be furthered. The question is how these distinct forms of the social good can be fostered simultaneously. If central planning goes too far in one direction, market socialism goes too far in the other.

When a particular enterprise is allowed to accumulate retained earnings over time, the dissociated sociality that socialism aims to overcome returns in the form of competition among separate enterprises to increase their retained earnings. The more successful firms are in market competition, the greater the

68 McNeil 2014.

69 See Nove 1991.

economic security and material reward of their members. The goal of investments would increasingly tend to be increasing returns, rather than investment for social needs. Over time a dominant structural tendency would arise for Collectives to pursue the particular self-interest of their members, weakening and eventually undermining the dialectical mediation of their particular good and the universal good of the community as a whole.

A core feature of the republican socialist model presented here is that the prices of produced goods are determined by the social costs of their production, representing the time that must be spent in labour necessary for social reproduction and the environmental costs of production. The final price does not include the additional mark-up Keynesians refer to, or the 's' that in Marx's framework refers to the surplus value produced by living labour. As a result, *there are no retained earnings in the model*. Units of production have no other source of investment funds besides those provided by the Social Investment Centres (discussed in the following chapter). Members of Worker Collectives engaged in production have no other source of income in return for their social labour in Collectives than the funds allocated by those Centres for that purpose. In socialism, all investment is *socialised* investment, all remuneration for social labour is *socialised* remuneration.

A market socialist would insist that the public authority could simply tax retained earnings and redistribute the results to maintain fairness and other socialist desiderata. It is easy enough to assume this could be done, just as it is always possible to imagine some public policy capable of removing any problem in capitalism one might think of.⁷⁰ But it is one thing to imagine something, quite another to show that what we imagine is a realistic option in the given social context.

Market socialists seek an alternative to capitalist market societies, rather the more humane variant sought by social democrats. They would agree that no reform can eliminate structural coercion in capitalist labour markets, domination and exploitation in the capitalist labour process, or any of the other essential determinations making capitalism the historically specific social formation it is, any more than reforms to slave systems or feudalism can overcome the inherent coercion, domination, or exploitation of the master/slave and lord/serf relationships. The problems are rooted in the property and production relations of capitalism (feudalism, slavery), and are not overcome unless these relations are dismantled. What market socialists fail to see is that the

⁷⁰ Bothered by the coercion of the capital/wage labour relationship? Just imagine a basic income guarantee high enough to overcome it. Problem solved! If only it were that simple.

same reasoning applies to market societies. If there is an inherent tendency in market societies for powerful groups to assert particular interests over the universal social good, this tendency will hold for the market societies flying the banners of market socialism. Such assertions will occur spontaneously, experienced as 'natural'. When most investment in production is left to particular enterprises using their retained earnings, and when the level of income of those contributing labour to those enterprises is a function of retained earnings, it is all too 'natural' for their members to act in a way revealing that for them the real purpose of their production is the particular good of their retained earnings.⁷¹

Perhaps at first the sense of solidarity in a Collective enjoying great market success would be strong enough that only a few members grumble now and then about state-imposed constraints and redistributions. However, any attempt to correct the results of market tendencies consistently and on the scale market socialists concede is required would tend to make the grumblings louder over time. As we know from historical experience, there is a strong tendency in market societies for those appropriating high levels of pre-tax earnings to believe they are morally entitled to those earnings, ignoring the fundamental social fact that individual success always depends upon background social conditions and the actions of other social agents. While that is true in capitalism as well, it is not how things tend to appear.⁷²

Very powerful criticisms of that very mistaken view have not proven powerful enough to eliminate the tendency.⁷³ Markets appear to reward the deserving; this is an objective illusion and not merely a mistake of subjective thinking. While the victims of market power are often open to a critique of this appearance, this is much less the case for those enjoying market success.

The same tendencies can be expected to be unleashed in a socialism incorporating generalised commodity production and exchange. The commitment

71 This was in part why Kornai concluded that market socialism is an incoherent model generating a 'natural' constituency for capitalism that will prevail whenever forces pulling towards bureaucratic state socialism are weak or non-existent (Kornai 1992, Chapter 21). Devine agrees with Kornai's judgement of the internal incoherence of market socialism. He presents his model of democratic planning as an alternative to market socialism, thanks to the eradication of 'market forces' (Devine 1988, pp. 107–9). (And yet his model retains a central role for retained earnings. In my view, this is an inconsistency.)

72 The computer sector has depended on massive and continuing public funding of research at the scientific-technological envelop since Day One. Nonetheless, a plague of libertarians is clustered among the wealthiest denizens of Silicon Valley.

73 For example, Murphy and Nagel 2004.

to freedom of association, free speech, and political pluralism in republican socialism provides a space for the latter to form political coalitions of successful enterprises and their supporters with an agenda to reduce taxes, lessen redistribution, and grant particular enterprises private control over growing amounts of retained earnings. When such coalitions emerge the tension between particular enterprises and Democratic Assemblies imposing taxes and redistributions will be ongoing, weakening social solidarity over time.

If there is a feature of a model of socialism that has a strong tendency to generate outcomes that over time can be foreseen to erode the socialist project, the temptation to assume that the threat can be eliminated indefinitely by suitable taxes or regulation or some other *deus ex machina* should be resisted. Essential matters should not be left so contingent, so prone to being distorted and reversed. It would be far better to institute a socialism that does not include such self-undermining tendencies, a socialism that does not generate its own gravediggers, so to speak. It would be far better to collectively construct a socialism where the danger of accepting an illusionary misleading appearance as ‘natural’ does not ‘naturally’ arise.

There is a yet deeper difficulty. If the investments production enterprises are able to undertake and the income their members can receive are a function of the enterprises’ retained earnings, then competition among units of production for retained earnings will inevitably shape the life of the society as a whole. The logic of the situation would make it the case that enterprises *must* in fact make accumulating retained earnings their first and foremost goal, at the pain of falling behind competing enterprises and, ultimately, not being able to continue operating at all. When this is the case, ‘capital’ emerges as a higher-order unity, a ‘macro-monetary totality’ imposing valorisation as the primary purpose of social life. We would be in a world of ‘capital without capitalists’. A model of socialism for the twenty-first century must not take a path leading here.⁷⁴

When particularity involves reinvesting retained earnings to further the particular advantages of particular Collectives, or distributing retained earnings as additional income to members of particular Collectives, a systematic antagonism tends to arise in the model between particularity and universality.⁷⁵ In

74 See McNally 1993, pp. 179–84. This critique holds as well for the model of ‘Property-Owning Democracy’ that Rawls and others have proposed as an alternative to both capitalism and socialism. On property-owning democracy see O’Neill and Williamson 2014. A critical assessment is provided in Smith 2017a, Chapter 12.

75 ‘If the goal of worker management is cooperation among a specific group of producers for

the socialist model defended here, where retained earnings are eliminated and all decisions regarding social investment and remuneration of social labour are mediated by institutions and practices of collective self-governance, tensions between particularity and the universal social good of the community as a whole are contingent rather than systematic, and correctable before becoming entrenched. If we want social production to be socially acknowledged as *social* production, then *all* investment must be *socialised* investment, leaving no role for private investment from retained earnings.

On the principle that the best defence is an aggressive offense, a defender of market socialism would likely reply that if the members of Worker Collectives are not able to appropriate and allocate retained earnings, they would not have sufficient incentive to operate efficiently and address consumer needs effectively. If that were the case, 'the full and free development of every individual' would not be furthered. Full consideration of this crucial point must be postponed until Chapter 10, when we have a much better sense of the model as a whole.

6 Conclusion

The present chapter began with an account of how local social needs and priorities among them can be determined in the local community within social forms of representative democracy (self-selecting Community Activist Groups, Community Associations selected by lots, elected Democratic Assemblies) and direct participatory democracy (informal public deliberations in socialist civil society, public forums, referendums). After social needs and priorities among them have been democratically determined (albeit mostly in general terms), the challenge is to organise social production to ensure that it will address those needs effectively in the coming period.

Section 2 argued that this can best be done within a flexible indicative plan. The first step in formulating the plan, examined in Section 3, is to mobilise the creative intelligence of the members of self-governing Production Collectives in deliberations about the output they have the capacity to produce, whether

the purpose of maximizing income per worker, then *who is the Other*? The answer is *other* groups of workers who are competing, producers who are selling required inputs, members of society who are your market or who assert a claim upon your means of production or upon the results of your labor, those who would tax you, the state – indeed, *everyone else*' (Leibowitz 2010, p. 76).

consumption goods addressing a subset of individual and community needs or production goods required by other producers. These deliberations culminate in official requests for social funding. These requests must make the case that the Production Collectives either have or could relatively easily obtain the human skills and non-human productive resources enabling them to effectively address an important specific subset of social needs in the coming period. In some cases, this involves commitments to produce specific products. In most cases, the commitments are more general: Collectives receiving funding will produce one or more type of needed products, taking into account innovations and shifts in social wants that may occur over the course of the coming period.

Requests for funding must also include an estimation of a Production Collective's costs over the coming period. Section 4 treated the two categories of costs at considerable length: the income received by members of the Collective and the funds required to acquire means of production from other Collectives. Regarding the former, the number of the number of full-time (or full-time equivalent) members is multiplied by the average of worker income as fixed by the international Social Transaction Centre (discussed in Chapter 9). The latter category of cost is more complex. It is indeed perhaps the most complicated dimension of the entire model.

The 'cost' of acquiring an input is, of course, its 'price'. Scarcity quotes are appropriate (and implied when they are not used) because in this model of socialism they are not market costs or market prices. Market prices do not do what needs to be done, that is, reflect the true social costs of production: opportunity costs as measured by social needs and not actual (or, even worse, imputed) expenditures of disposable income; environmental costs relative to the planetary states conducive to human flourishing; the costs workers must pay in time spent in labour necessary to the material reproduction of the society. A society treating output costing relatively little to produce the same as output whose production imposes tremendous social costs cannot be considered rational. A procedure for determining prices that conveys social costs more accurately and comprehensively was sketched. One striking feature of the proposal is that the price of a Collective's output does not include profits and therefore does not allow retained earnings to be appropriated. Section 5 contrasted a socialism with these features with market socialism, arguing for the advantages of the former.

A set of proposals is not itself an indicative plan. It is only a set of its possible components. The indicative plan itself is only established when decisions on allocations of social funds have been made. Social production and social exchange between producers and users of their products must

then creatively translate the indicative plan to concrete actuality. These are the topics of the following chapter.

The goal throughout this work is to develop a model of socialism maintaining a dynamic balance of universality and particularity, each complementing the other, avoiding both a collectivism that suppresses the particularity of units of production, their members, or the users of their products and an individualism indifferent to actualising what is good for the society as a whole.

The Local Level (2): Social Investment, Social Production, and Social Exchange

Section 1 of this chapter describes the process of social investment on the local level, beginning with assessment of requests from Production Collectives and culminating with an allocation of social funds constituting an indicative plan for the coming period. Who provides the assessments and who makes the allocations are obviously crucial questions here. Section 2 examines the production processes of the Worker Collectives receiving social funding. Emphasis is placed on how fulfilling the commitment to addressing social needs demands mobilising the collective creative intelligence of Collectives' members. Section 3 examines how social individuals and associations in the community obtain individual and social consumption goods, completing the presentation of the local level of the model of socialism developed in this book.

1 The Allocation of Social Investment

The process of social investment has two steps. An assessment of the proposals for investment is followed by the decision to allocate investment funds.

1.1 *Assessments of Allocation Requests: Sector Agencies and Producer Review Boards*

In capitalism today the performance of individual firms, and the potential of start-ups emerging from universities or research parks, is monitored by a small army of specialists working in banks, hedge funds, investment companies, insurance companies, consulting firms, ratings agencies, business schools, and so on. Loans, bond sales, initial public offerings, purchases of equity in established companies, and all the other forms of financial investment occur or do not occur depending on how these monitorings and projections are interpreted by investors and their agents with one primary consideration in mind: the returns on their investments that private investors can be reasonably foreseen to appropriate, whether from interest payments, dividends, or capital gains.

In republican socialism too proposals for investment in units of production must be vetted. The difference is simply that proposals for social production for social needs are examined by organisations representing the community as

a whole and not by private firms primarily concerned with their own profits or the monetary returns of those who pay for their advice.

Sector Agencies were introduced in the previous chapter, although they are national-level rather than local-level organisations in our model. As the name suggests, there is a separate Agency for each major sector of production and distribution. Their main tasks include:

- * collecting relevant quantitative and qualitative information about all Worker Collectives operating in a given sector;
- * determining the main challenges faced by those producers;
- * participating in the process of determining the long-term direction of the regional, national, and international innovation systems that shape the future paths of development taken by sectors (discussed in the later chapters);
- * working with Research Centres to spur scientific-technological advances of potential import to its sector in the short-to-medium term;
- * disseminating knowledge about relevant scientific-technological advances to producers in that sector;
- * supporting producers to meet their challenges (by diffusing information about 'best practices', aiding the adoption of innovations, and so on);
- * supporting the work of local **Producer Review Boards**, discussed below;
- * providing Production Collectives with feedback on their provisional estimations of costs in the coming period; and
- * submitting an overall assessment of requests for social investment to Social Investment Centres.

The concern here is with the last item.

If a Collective requesting investment in the coming period has been in operation in previous periods, the assessment by the relevant Sector Agency includes a comprehensive summary of its past performance. Did the Collective produce products addressing some subset of social needs as it promised in previous applications? How did its costs of production compare with similar

units of production operating in the sector? How did its quantitative output compare? Were there any patterns, positive or negative, regarding the quality of its products? If a Collective produced inputs for other producers, have the latter been satisfied with their quality? Have any concerns been raised by Community Activist Groups, Community Associations, National Assemblies, or participants in public forums? Do people in the local community think the output of the given Collective has addressed their needs adequately, all in all, relative to other enterprises operating in the sector in that locality and elsewhere? How innovative has the Collective been relative to other producers in the same sector? Did it take advantage of potential innovations emerging from the system of Research Centres? If so, was it an early adopter, a laggard, or something in-between? How actively engaged are its members in the life of the Collective? Is the intelligent creativity of members fully mobilised?

These questions are broader than those investigated in the research used by banks, hedge funds, investment advisors, and so on. But complying information to answer them is not inherently more difficult than the information complied by research on specific firms today.

Local Producer Review Boards supplement the comparative assessments of Sector Agencies by placing the record of a Production Collective in the local context. Perhaps there were contingent local factors (weather, infrastructure repairs, turnover in Worker Councils, etc.) that explain why a Collective performed relatively poorly at addressing social needs compared to others in the same sector. Perhaps there are reasons to think that past achievements might be difficult to maintain. Perhaps its efforts to improve the quality of work life of its members had exceptional impact on the life of the local community. The number of Producer Review Boards in a local community will be a function of the number of Production Collectives operating in the local community.

When there is a request for investment to establish a new Worker Collective, assessment by a Sector Agency and Producer Review Board is more complicated. If members of the proposed new enterprise have had experience in other Collectives, the performance of those Collectives may be relevant to an assessment of the proposed new organisation's prospects. If most projected members are without previous experience, it might be better to request funding from a special pool for research parks for start-ups (discussed in Chapter 8).

The assessment by a Sector Agency mediates the particular perspective of a Collective with the more universal perspective of the sector of production as a whole. The assessment of a local Producer Review Board mediates the particular perspective of a Collective with the more universal perspective of the local community where it operates. It is important that the membership of these

bodies is fixed in a way generating confidence that deliberations within them do in fact systematically tend to mediate universal and particular perspectives in appropriate ways. While Sector Agencies are national-level social organisations (see Chapter 9 below), their importance in the social investment process justifies some remarks here on how on their members could be selected.

The process begins with the workforce of every Production Collective operating in a given sector in the nation electing one or more (depending on its size) candidates. A selection by lot is then made from this pool, making use of algorithms designed to ensure representation of Collectives of different sizes and geographical locations. The members of local Producer Review Boards are selected by sortition from local workers from this pool.

Selecting workers from a sector or locality to provide assessments of units of production operating in that sector and locality extends the republican principle of worker self-governance beyond the micro-level of enterprises. Those assessing requests for local investment in a sector are co-workers with concrete experience of working in that particular sector or locality. The respect shown by their colleagues in nominating them provides a reason to be confident that in general, even if not necessarily in every particular case, they will have relatively extensive formal knowledge and informal embodied know-how about the challenges faced by units of production in the particular sector or locality as well as a disposition to be fair. (What workforce would want a reputation for proposing incompetent candidates lacking a sense of fairness?)

The same national Agency that provides technical support to Community Associations could also provide assistance to Sector Agencies and Production Review Boards in collecting and processing relevant data enabling comparisons to be made among units of production operating in the same sector or the same locality.¹ Insofar as specialised expertise in techniques of assessment is valuable for members, courses could be offered at a local university or other site to provide background knowledge analogous to that taught to students in capitalism to prepare them for work in consulting firms or the research departments of banks and investment firms, modified as necessary by the quite different demands of evaluating investment requests in socialism.

The period of appointment to Sector Agencies and Producer Review Boards should be limited to prevent bureaucratic ossification. But it should be long enough that with staggered terms a critical mass of those making evaluations have reasonably extensive experience at any time. Perhaps a six-year tenure,

¹ Subject to the proviso stated in note 14, Chapter 5, above.

with a third of the members of the Agencies and Boards replaced every two years would be suitable. The general expectation will be that at the conclusion of the appointment period persons return to the Worker Collectives they had been members of. When they share their experiences with co-workers consciousness of what production for social needs requires is extended and deepened.

The sort of information Sector Agencies and Review Boards are asked to process here is analogous in some respects to the information about firms in a particular sector that underlies reports on that sector from capitalist 'think tanks' (OECD, McKinsey Global Institute, etc.). It will be far easier for Sector Agencies to provide more accurate reports than business think tanks today. Its members have worked in the particular sector or locality and can evaluate a particular Collective's claims with the help of their lived experience. And all relevant information is categorised as public, not able to be hidden by claims to be proprietary. The goal is not to have the knowledge of all possible possibilities of production that would be required for effective central planning. The goal is instead to have enough knowledge of the relative success Production Collectives have had at producing for social needs to make informed decisions about whether they warrant further social investment. Experienced workers in a sector or locality will be able to make informed judgements on that matter. The relevant evidence is available, and they will have adequate time to consider it.

It would be unrealistic to think that a Sector Agency or Review Board will always reach a perfect consensus. Their evaluations should include minority views. When a particular Worker Collective a member of the Agency or Board had been a member of is evaluated, that member must be recused. There is little need to be concerned that evaluations may be prejudiced by fear that a positive recommendation will lower or eliminate the chances of the member's own Collective receiving investment funds. In the absence of compelling quantitative or qualitative evidence to support a negative evaluation, other members of the Agency or Board will not be convinced. In this context it is also worth stressing that the reports of Sector Agents and Producer Review Boards are public documents. Public comments on both should be solicited and shared with Social Investment Centres and the national Democratic Assembly and local Democratic Assembly that oversee the (national) Sector Agency and (local) Production Review Boards, respectively. In cases where an Agency or Board consistently and significantly fails to fulfil its responsibilities, the relevant Democratic Assembly has the power to restructure it, soliciting as appropriate members of Agencies or Boards who have recently stepped down to provide needed experience for the restructured organisation.

1.2 *Decisions Allocating Social Investment: Social Investment Centres*

For any future we can realistically anticipate, a viable socialism must include a 'realm of necessity', including the production of goods necessary for the material reproduction of the social order within formally organised workplaces. One of the most important ways this purpose is furthered is through establishing a socialist indicative plan regarding production for the coming period. As remarked above, this feature of the model is analogous in some respects to the postwar developmental state, whose planning was for the most part also defined in general terms. The main disanalogy, however, is far more significant: in the developmental states of capitalism political elites formulated an indicative plan aiming at the appropriation of surplus value in the capitalist world market, funnelling investment funds to private corporations committed to that goal. In socialism funding aims for 'the full and free development of every individual'.

The democratic determination of social needs is one step in the process of formulating an indicative plan for socialism. Submitting proposals for social investment by Production Collectives is another. The final step is the allocation of social investment funds. *The content of the indicative plan for the coming period is the aggregate content of the proposals of Production Collectives that receive social funding.*

There are a variety of criteria relevant to the allocation of social funds to producers in republican socialism. Among the most important are:

- * A Production Collective receiving social funding must have made a strong commitment to address a social need or range of social needs in return for that funding.
- * A Production Collective receiving social funding that is presently operating must have proven able to produce goods of high quality in appropriate quantities. (Or it must at least have a plausible plan for being able to do so in the near future.)
- * A Production Collective receiving social funding that is presently operating must have proven able to undertake appropriate innovations successfully. (In special circumstances it must at least have a plausible plan for being able to do so in the near future.)
- * There must be good reasons to expect that a Production Collective receiving social funding that is presently operating will prove capable of both producing goods of high quality in appropriate quantities and innov-

ating in the future. When the request is to fund the establishment of a new Production Collective this criterion is obviously crucial.

* The estimates of a Production Collective's costs in the coming period must be reasonable.

* The anticipated environmental activities of a Collective's proposed production and the use of its products must be acceptable (that is, impose an environmental footprint consistent with the second solidarity constraint, limiting the aggregate allowable environmental footprint in the locality.)

* If it is presently operating, a Productive Collective receiving funding must manifest effective workplace democracy in its present operations and plausibly promise to continue to do so in the future. For funds to be allocated to establish a new Production Collective in operation, it must manifest a strong commitment to establishing effective workplace democracy from the start.

* If it is presently operating, a Productive Collective receiving funding for the future must have mobilised the intelligence and creativity of its members in its present operations and plausibly promise to continue to do so in the future. If funds are allocated to establish a new Production Collective, it must be committed to mobilising the creativity and intelligence of members from the start.

A considerable amount of relevant information regarding the application of these criteria in particular cases is made available to all social agents in socialist world. All have access to a data base including all the general categories of goods addressing the three main divisions of social needs, demographic projections enabling a rough approximation of the quantities of these goods needed in the coming period, the specific goods that have been preordered, specific goods projected by predictive algorithms to be needed in the coming period, the general priorities among the social needs addressed by these goods, scientifically-based estimates of the environmental footprints associated with different production and distribution processes, the range of inputs required for different production processes, and other relevant matters. The reports of Community Associations are also made public, documenting which particular Collectives are outliers, producing products that either address social needs exceptionally well or exceptionally poorly. If many units of production plan to acquire the outputs of a supplier, that is relevant to the supplier's case for

continued social investment. When few plan to do so, that suggests that further social investment in the supplier may not be justified.² Another available data base includes available information regarding the Productive Collectives; assessment of their productive capabilities, the specific and general sorts of outputs mentioned in their proposals, the suppliers they could in principle acquire inputs from and/or supply inputs to, the estimated costs of production (and therefore the estimated prices of their output), the reports of members regarding their Collectives' record of innovation and mobilising intelligence and creativity, the assessments of Sector Agencies and Producer Review Boards evaluating how a particular Collective has performed relative to others in its sector or territory, and so on.

This material cannot simply be entered as data into a computer and then processed by an algorithm spitting out decisions about which Collectives should be funded and which not.³ Two reasons why acceptable allocations of investment funds cannot be derived from the given data merit mention here.

First, the future is radically unknown. No possible addition to the data extracted from the past and no breakthrough in the use of machine intelligence to extrapolate that data into the future will ever eliminate this dimension of the human condition. Present allocations are always inseparably tied to future uncertainties. This makes present allocations a matter for practical judgement rather than logical deduction.

Second, all the criteria for social investment mentioned above matter. In an ideal world, all Collectives requesting funding will meet all criteria to the greatest possible degree. Realistically, however, some will be better in some respects and worse in others. How should the various considerations be weighted? How much does social need for a product compensate for a large environment footprint from producing it? If one Production Collective in socialism has proven more successful in innovation than another, while the latter addresses social needs that have been democratically determined to have slightly more priority, which should be funded when limited funds require that

2 An especially important source of information relevant to the continued funding of Production Collectives already in operation involves a component of the model that has not yet been introduced, the freedom of choice of Community Agencies and social individuals to use the funds they control to acquire the means of social consumption and individual consumption. If there are many Agencies and social agents who wish to acquire the outputs of a final producer, that is relevant to the producer's case for continued social investment. This provides evidence that the second item in the list of criteria in the main text has been met. When there are few that wish to acquire them at their cost of production this suggests further investment may not be justified. See Chapter 6, Section 3 below.

3 See Benanav 2020b.

a choice be made? Too many of the relevant considerations are heterogenous; too many warrant different weight in different contexts. Qualitatively diverse criteria cannot be reduced to a single quantitative measure. How much weight a given factor should have in a given context is a political question. Such questions cannot be settled by a rule, no matter how complex it might be and no matter how much data it is based upon. (How a rule should be applied in a particular context, after all, is itself a political question.⁴) Practical judgements weighing incommensurable factors have to be made. The real question is who has the authority to make them.

In slave societies, slave owners (or their agents) had the social power to dictate who produced, what was produced, when it was produced, and how it would be produced among the feasible options. In feudal society, lords had similar power over serfs. In bureaucratic command economies, political elites ordered some forms of production to take place and not others. In capitalism, ownership of investment capital gives its holders (or more typically their agents) the power to give permission for some forms of production to occur and to withhold permission for others, along with the power to determine who receives wages and who does not. In the form of socialism advocated here, there is no class of slave owners or landed aristocrats with the social power to give or withhold permission for production to occur. Nor is there a small group having that power due to their place in a bureaucratic hierarchy or their private control of a critical mass of investment capital. In republican socialism, permission to undertake production is explicitly *social* permission and the process of granting is accordingly *socialised*.

As noted, the information provided in requests for social investment and the assessments of those requests are a matter of public record in republican socialism, easily and freely available to everyone. Should there be public forums for public deliberation on investment proposals, followed by a referendum where members of the local community vote on each request? Only a moment should be needed to realise how incompatible such extreme participatory democracy would be with 'full and free development of every individual'. We cannot assume that all people will freely decide to devote all, or most, or even a considerable part, of the one life they have appropriating the information required to make informed investment decisions regarding every investment request in the local community (let alone all those made on regional, national, and international levels, as discussed in later chapters). It is certainly

4 As is any rule for applying rules, any rule to apply rules about applying rules, and so on to (bad) infinity.

not democratic to demand that they spend their time in this way regardless of their own dispositions and preferences. And even those few who would be willing to spend their lives this way would lack sufficient time to become adequately informed about all funding requests.

In the model of socialism defended here, allocations are made by members of **Social Investment Centres** representing the community as a whole. The power to allocate society's investment funds is a crucial form of public power, mediating individual units of production, particular sectors of production, and social needs in the society as a whole. If the republican principle that all exercises of public power must be subject to public control is to have full actuality, it must be applied here. A combination of 'external' and 'internal' considerations ensure that it is.

The criteria for social investment are given 'externally' to the members of Social Investment Centres. They are not at their subjective discretion, even if applying them in concrete contexts requires their practical judgements. All the extensive information relevant to their application is freely available to all outside the Centres. The Centres must make explanations for their decisions publicly available as well, brief in unproblematic cases, but more extensive if requested. All social agents, and in particular all members of institutions of self-governance, are thus in a position to evaluate how the criteria are applied in particular cases. The community as a whole, made up of agents actively participating in public forums and voting in referendums, will want to ensure that its collective determination of social needs is taken seriously in allocations. Community Activist Groups, Community Associations, Production Collectives, Sector Agencies, and Producer Review Boards all will want to see that the members of the Social Investment Centres have taken their input into account. Democratic Assemblies belong in the group as well. They have the additional responsibility of intervening when the criteria are wilfully ignored or applied in a capricious fashion, including the power to suspend or dismantle a Centre in cases of especially egregious abuses.

It is always possible that the members of an Investment Centre and a Production Collective could conspire to pursue their private interests at the costs of furthering the social purpose of a socialist society. Personal relationships, some sort of bribe, or mere incompetence could lead a Centre to fund a Production Collective that has a record of producing inferior goods addressing low priority needs, while withholding funding from one with a very positive record of addressing unmet high-priority needs. There are good reasons to think that this will be a rare occurrence, even without an (unwarranted) assumption of universal and perfect altruism. The process of allocation is fully transparent. If a Social Investment Centre appears to fail to follow its mandate adequately,

the members of other Centres will be able to note that quickly. Any Investment Centre, as well as a sub-committee of the Democratic Assembly tasked with monitoring the social investment process, can request that a Centre explain its reasons for making a particular allocation. If a majority of other Centres believe that the allocation does not adequately reflect democratically determined priorities or a reasonable estimation of the relative capabilities of the funded Collective, the allocation can be suspended until a full review can be made. If a Production Collective denied investment funding believes discrimination or some other form of bias played a significant role in that decision, an appeal can be made to the local Democratic Assembly, or a judicial review can be requested. In general, the local Democratic Assembly should refrain from interfering with the work of Social Investment Centres. Its members have a responsibility, however, to continuously monitor the work of local Centres, stop any transgressions, and correct those that have occurred. Further, the members of Community Associations, Sector Agencies, Producer Review Boards, Community Activist Groups, and the citizenry at large, can collectively be expected to provide effective oversight, detecting problems more or less instantly. Aware of the social transparency of their actions, the members of each Centre will tend to internalise the voices of others from the start, avoiding decisions favouring some at the cost of imposing unjustifiable costs on others.

From a standpoint more 'internal' to Investment Centres, the process of selecting their members is crucial. I do not think direct election is the best option. Each Centre requires numerous members, and so there would need to be many elections and even more candidates. Some candidates would almost surely lack the background and dispositions the role demands. It would be utopian in the bad sense to assume that all or most people in the community would have the information about each required to make truly informed choices.⁵ Also, a series of separate open elections would not necessarily result in a range of different perspectives being represented in deliberations about investment proposals.

A second option would be for the members of local Social Investment Centres to be appointed by the local Democratic Assembly. This might address the problems just mentioned to some extent. Members of the Assembly are in a position to become informed of the various candidates, eliminate the obviously unqualified, and appoint people from a wide variety of backgrounds. But the number of candidates would likely impose a great burden, given the other

5 Thinking that is utopian 'in a good sense' anticipates a better future while taking the feasibility of alternatives to the status quo seriously. An idea is utopian 'in the bad sense' when the issue of feasibility is effectively ignored.

important tasks of the Assemblies. There is also the worry that the members of a Democratic Assembly might be somewhat less inclined to provide impartial and critical oversight of the workings of Social Investment Centres had they appointed its members themselves. And there is a corresponding worry that the members of Social Investment Centres might feel beholden to an Assembly that appointed them. Further, the republican tradition cautions against excessively concentrations of power, and granting Democratic Assemblies this power of selection might raise this concern.

A better approach is suggested by the way other institutions in the socialist model provide the training, experience, and diversity that those charged with allocating social investments should have. For example, all but the smallest Collectives engaged in production will elect a Worker Council and, perhaps, managers with the responsibility of overseeing activities within the Collective to ensure its social tasks are adequately fulfilled. Those holding these positions will develop extensive practical knowledge of the challenges of producing for social needs. Other socialist organisations are also structured as Worker Collectives, and those past a certain size will delegate some authority to Worker Councils and managers/chairs, whether through election or rotation. Those who have been elected to leadership positions in Community Associations have had training and experience in articulating social needs of the community and the priorities among them. Ex-chairs of Sector Agencies and Producer Review Boards have had training and experience in assessing the effectiveness of units of production in meeting social needs. Past managers of the Research Centres discussed in later chapters have had training and experience in developing innovations that aim to address existing needs more effectively or invite the development of new needs enriching social life. Members of Democratic Assemblies, who have served their term have had training and experience in ensuring that the good of producers and users of their products are integrated together, along with other issues of broad community concern.

Social Investment Centres whose members have training and experience from the diversity of perspectives just listed would be in a position to accomplish what needs to be accomplished in the Centres. Many will have held elected positions, a sign of the respect of their co-workers. For members of a Democratic Assembly, it is a sign of the respect of their community. Since the right of recall holds for all elected positions, the fact that someone was not recalled is a sign that this respect was maintained during their term. An even stronger signal would be provided if those subject to their authority were asked to anonymously vote on whether they were suited to serve in Social Investment Centres. My proposal is that those receiving a supermajority of support from those they

were accountable to, form the pool of potential members of the Social Investment Centres. Selection from this pool is then made by lot in a manner ensuring that each Investment Centre has members from the locality representing a wide range of experience in institutions of socialist self-governance.

Given the importance of their role and the practical judgements it requires, it makes sense for the members of Social Investment Centres to have extended terms. Perhaps ten years would be appropriate, staggered so that one fifth are selected every two years. At any given time, the majority of members would then have sufficient experience in the work of the Centres to provide guidance for new members. While experience is an extremely important quality in this context, there are good reasons to not allow consecutive terms. That would help avoid the 'crony socialism' that plagued so-called state socialism in the twentieth century, when those with the power to allocate investments formed an alliance with those receiving investments at the cost of the broader community. Also, limited terms would enable more people in the community to develop an overview of investment in the community as a whole and directly participate in the process. Sharing their experiences and perspectives informally with other community members would enhance political consciousness in the society at large.⁶

The number of Social Investment Centres in a given locality will be proportional to its population size. A request for investment is randomly assigned to one of these Centres. Having a number of different Centres randomly assigned investment requests will also lower the risk of 'crony socialism'. This randomness prevents Production Collectives from 'shopping' for an Investment Centre likely to be overly sympathetic to its request.

Taking the 'external' and 'internal' considerations together does not guarantee that correct decisions will always be made by Social Investment Centres or that their decisions will never be contested. But the model does allow the specialised theoretical knowledge and practical experience of the members of Social Investment Centres to be mobilised without an anti-democratic accumulation of social power.

That, however, does not suffice for decisions regarding the allocation of social investment funds to tend to be reasonable and known as such. To affirm that stronger claim we must have good reasons to think that members of Social Investment Centres will be able to effectively assimilate the full range of relevant information. Followers of Hayek (including the market socialists who agree

6 Here and elsewhere, limited terms would also help maintain a relatively high level of enthusiasm, as new members replace old before the latter are 'burned out'.

with him on this point) would consider that impossible, given how vast the amount of relevant information they would need to assimilate is.

The full amount of relevant information about the production and social needs is indeed too vast for members of Social Investment Centres to assimilate completely. But we must keep in mind that we are concerned here with only local production for local needs, as called for by the principle of subsidiarity. The amount of relevant information is far more limited and tractable than that top-down central planners of a national economy would require.⁷ Also, members of local Social Investment Centres are embedded in their community. They have been members of Community Activist Groups, Community Associations, Research Centres, Production Collectives, Sector Agencies, and Producer Review Boards. All have been participants in the public forums where priorities among local needs are debated. Collectively, they already have much of the requisite background knowledge.

No less importantly, Social Investment Centres fix a merely indicative plan. They divide X amount of funds among Y units of production that together are to produce output that addresses social need Z , most often understood in general and open-ended terms. The X is a given from the standpoint of Social Investment Centres, fixed by the locality's per capita share of investment funds and the permissible environmental footprint.⁸ Z is given as well by the process of democratically determining social needs described earlier in this chapter. The information members of Social Investment Centres must assimilate is limited to that enabling them to make an informed decision about which Collectives are most likely to produce high-quality goods in appropriate numbers that address Z within the legitimate environmental constraints and therefore warrant social funding. What those goods are in specific, how they are to be produced, and other details, are left to the Production Collectives, while decisions regarding which produced goods best address needs are left to the social agents whose needs they are (or in the case of most universal goods, to their accountable representatives). The members of Social Investment Centres do not need to assimilate the relevant information that would be required to construct a comprehensive plan expressed in a matrix of all inputs and outputs in the entire economy. (Such a matrix is likely to be outdated before it is completed.)

7 As we shall see in later chapters, the members of regional, national, and international Social Investment Centres also only need consider data relevant to a relatively small set of producers.

8 It is fixed by the International Social Transaction Centre discussed in 9.3 below and limited by the first solidarity constraint.

Another matter of great significance here is that the burden of processing relevant information for investment decisions does not fall on the members of Social Investment Centres alone. It is a collective effort. Processing information about the productive capacities of Collectives in the locality, for example, is undertaken by other workers in the same sectors (Sector Agencies) or locality (Production Review Boards), even if Investment Centres have the final responsibility for making allocations.

A final consideration is that the model does not fix a particular number of Social Investment Centres in a locality. It should be a function of population size, but it is left open what that amounts to. If a particular number of Social Investment Centres is too low to assimilate the information that needs to be assimilated to make reasonable allocation decisions, the number can be increased.

All in all, it is not obvious that the demands placed on members of Social Investment Centres ask all that much more of them than what is asked of investment bankers, hedge fund analysts, and so on, in capitalism, whose allocations of vast sums is based on processing vast amounts of information.⁹ It certainly does not ask more of them than defenders of 'stakeholder capitalism' demand of capitalist investors.¹⁰

After considering how the members of Social Investment Centres are selected and the information they must take into account, we can now turn to the process of making allocations. The proposal here is that the members of Social Investment Centres, taking the available quantitative and qualitative evidence into account as best they can, engage in a *two-step horizontal coordination of investment decisions*.

In the first step, the Social Investment Centres make the easy decisions, funding the producers of final products and the suppliers of inputs who have proven (or promise) to contribute the most to production for social needs of high priority while meeting all other relevant criteria. Each centre tracks in real time the investments other Centres make. In specific, when an investment made by one Centre contributes to addressing an inadequately addressed social need or builds up the productive capacity of either a final producer or a

9 As a point of comparison, in July 2023 a single investment firm, BlackRock, had \$9.4 trillion assets under management (Brush 2023). A Social Investment Centre must consider a wider variety of factors than a hedge fund, but with far fewer options for its allocations.

10 In proposals for 'stakeholder capitalism', capitalist investors are asked to take the full range of social consequences of their investments fully into account. Such a request can only be based on bad faith or ideological delusions, since profit considerations systematically push other concerns to the side in capitalism. In republican socialism, the horizon of the members of Social Investment Centres will not be similarly restricted.

potential supplier, all other Centres will instantaneously know this. As a result, excessive duplication of investments can be avoided.¹¹ Nonetheless, when this first step concludes, some social needs will undoubtedly remain inadequately addressed. It is also extremely likely that the productive capacity of potential users of supplied inputs and the productive capacity of their potential suppliers will not adequately correspond.

In the second round of investments, allocations are formally coordinated in an organised sequence. Prior to each allocation computer programs point out where the greatest areas of inadequately addressed social needs remain. These same programs can also show where there are significant imbalances of productive capacity between final producers and suppliers. Each Social Investment Centre is under a mandate to take that information into account in the second round of allocations. When its turn comes it must direct funds to Collectives capable of addressing as yet unaddressed needs and imbalances.

It is likely that there will be enough proposals for addressing the social needs of the local community in the coming extended period to warrant the complete expenditure of available funds. Worker Collectives engaged in production know what the social needs are, where their own productive strengths lay, the strengths of many other Collectives, and the categories of needs those other Collectives are most likely to propose addressing. They will tend to seek a niche where they can make the strongest possible strong case that their potential contribution justifies social investment.

On the other hand, however, it is quite possible that too many Collectives focus on addressing the same categories of needs, leaving others of considerable import inadequately covered. If this is the case, the members of Investment Centres must investigate whether there are Production Collectives not yet funded that could in principle address a category of need not highlighted in their proposals.¹² If so, social investment funds could be allocated to them if they are willing to modify their strategic plans for the coming period. Another option would be to see if there were start-up Collectives presently maturing

11 Whether there will be more than one provider of the sort of good in question depends on the allocations of the Social Investment Centres, which in turn depends on the priority given to multiple providers in the democratic determination of needs. In republican socialism, the trade-off between increased choice and avoidance of duplication is a matter for democratic deliberation and decision-making and is not left to either the spontaneous result of markets or the machinations of state officials.

12 Specific Sector Agencies, having detailed knowledge of firms in the locality operating in specific sectors, are in a position to suggest candidates.

in research parks potentially able to scale up production addressing otherwise unmet needs on an accelerated schedule with additional funding.¹³

After the final round of investment, the location's share of investment funds will have been allocated in a manner reflecting the democratically determined priorities of social needs and environmental concerns, avoiding overinvestment in some sectors and underinvestment in others while maintaining a rough balance between suppliers of production inputs and units of production requiring inputs. No social system can guarantee a perfect match of production and social needs. There is simply too much uncertainty in the world. But the two can be matched in a far better – far more effective, far more just – manner in this model of socialism than in any variant of a capitalist market society, market socialist society, or centrally planned economy. (An overview of the complete structured process is depicted in Figure 7 below.)

At the conclusion of the allocation process, a set of Worker Collectives producing to meet the social needs in the local community has been allocated funds to operate over the coming period. If we assume a five-year period, one fifth of the funds will be slated for distribution each year, following an annual review.¹⁴ In the review representatives of a Social Investment Centre and the Collective discuss the latter's performance. Has it produced the sorts of products it committed to producing? Have potential users chosen to acquire them? Have any concerns about either the quantity or the quality of those products emerged? Has the Collective undertaken product or process innovations? Has it maintained the production apparatus in good condition for future use?¹⁵ What has it done to enhance the work conditions of its members? Are

13 It is important to keep in mind here that the discussion has been limited to goods produced within the formal organisations of what Marx termed 'the realm of necessity'. Needs that are not addressed by formally organised Worker Collectives might be addressed in 'commons-based peer production' in 'the realm of freedom', where products are produced that are then distributed freely to anyone who wishes to use them. We should also note here that in socialism the sphere of freedom will be expanding over time. (See Chapter 9 below.)

14 What of expensive machinery that exceeds the income allocated to a Collective for the year? Nothing in the socialist model rules out gradual payment over time (without interest). Approval by the relevant Sector Agency (or Agencies) should be required in order to lessen the danger of excess productive capacity and to discourage enterprises that have not employed machinery systems effectively in the past from continuing to employ them ineffectively.

15 When a particular Collective no longer needs to use a machine or similar fixed production good, requests from other Collectives for it could be solicited, with a special committee of members of local Social Investment Centres and the relevant Sector Agency deciding which is likely to make best use of it.

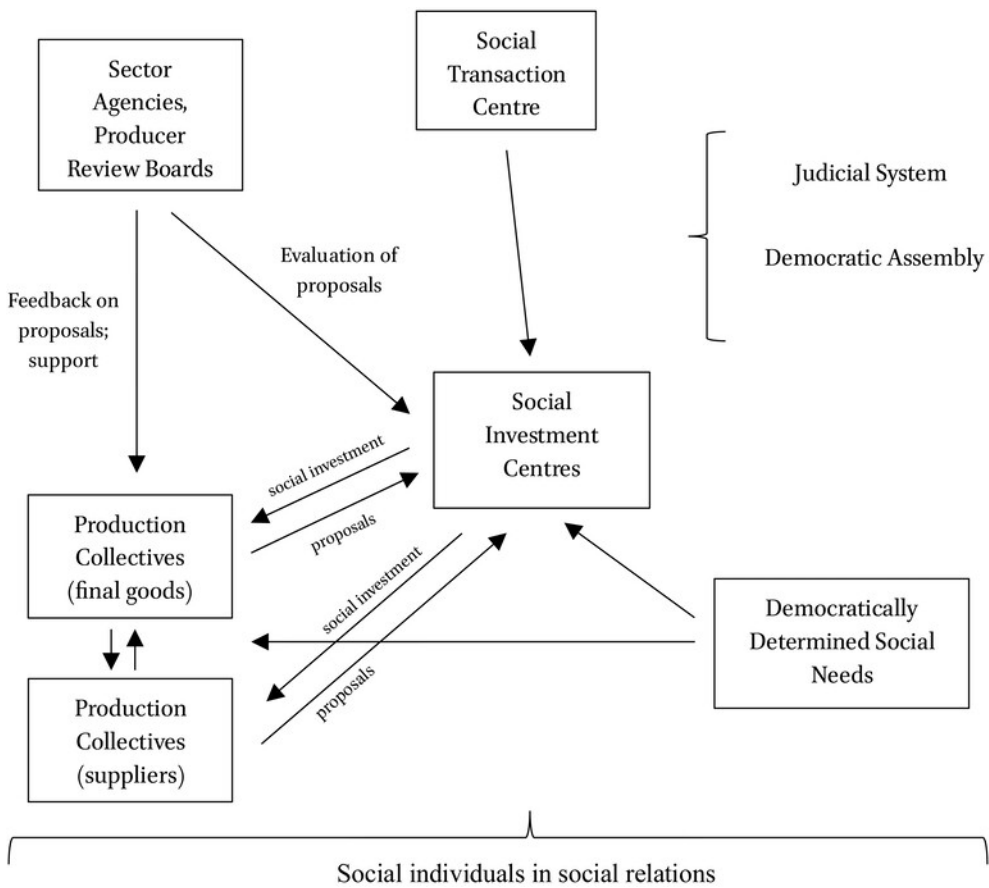


FIGURE 7 The allocation of social investment

any adjustments in its medium-to-long-term plans required? Are its costs of acquiring necessary inputs close to what was anticipated? Do the ‘prices’ of its own outputs have to be adjusted? Social Investment Centres are able to consult Sector Agencies, Community Associations, and other sources of useful information regarding these issues.

In most cases the annual review should be relatively straightforward, and the annual instalment of funding should quickly follow. But if a unit of production has failed to address social needs effectively over the prior year, steps must be taken. When there are ‘red flags’ regarding a unit of production’s performance it should not be immediately shut down. But it must formulate and implement a realistic plan to change the situation, working with the relevant Sector Agency and with Research Centres to adopt ‘best practices’ and innovations that might help it improve. If there were opportunities for improve-

ments and the improvements were not forthcoming, Social Investment Centres should make adjustments during the annual review process, and not wait until planning for the next extended period.¹⁶ Sometimes this will involve withholding a portion of funds originally intended for one Collective and shifting it to another. In extreme cases an ineffectual producer will have to be shut down. The decision to withhold social funding is clearly a political matter, not to be left to algorithms. Here too practical judgements must be made by the members of Social Investment Centres, incorporating the advice of the Sector Agencies and Research Centres that have tried to support underperforming producers. When funds are withheld the reasons must be stated publicly, with rights of appeal to both the Democratic Assembly and the judicial system.

It is time for a brief summary before proceeding. The institutions and social practices of Community Associations, Democratic Assemblies, Producer Review Boards, Sector Agencies, and the members of the local community participating in public forums and referendums, all provide relevant information regarding social needs. Proposals for investment of self-governing Worker Collectives provide relevant information regarding the productive capacity that exists or can be reasonably foreseen to become available. In socialism, permission to undertake production is explicitly *social* permission, given by social agents representing the community as a whole and explicitly based on shared social criteria. The funds allocated are grants, not loans (an important feature of the model I return to in the following chapter). The work of Social Investment Centres is subject to oversight of the community as a whole and, in specific, the members of other institutions of self-governance (especially the Democratic Assemblies).

No comprehensive matrix of inputs and outputs is imposed on Production Collectives. The planning in this model is indicative planning. The democratic determination of needs and priorities among them for the most part only defines a general direction of social development. Apart from investments to produce specific pre-ordered goods and provide specific community goods (e.g. a bridge here, a school there), the social funding of Production Collectives leaves open the specific goods and services they produce to address social needs. These Collectives also have the autonomy to decide for themselves the particular mix of inputs they use in the production process and the units of production those inputs will be acquired from.

It is unreasonable to think there is a social mechanism capable of perfectly capturing all the information relevant to social production for social needs. A

16 This point is discussed further in Chapter 6, Section 1 and 2.3 below.

single, unambiguous, and determinate consensus about the relevant matters is unlikely to ever be forged. Even after extensive deliberation the understanding of our social needs, the priorities among them, the goods and services that would best address them, the productive capabilities required to produce them, and so on, will remain in flux as new things are learned about ourselves, our society, different ways of living, the different sorts of goods and services possible with today's technologies, and the technologies that might be possible tomorrow. Here, as so often in social life, satisfying will have to suffice. There is again, no claim that the model of republican socialism developed in this book is perfect. The underlying claim of this section is that the model outlines a feasible way to allocate social investment furthering the 'full and free development of every individual' better than any feasible variant of capitalist market society without imposing unreasonable demands of time, effort, knowledge, or altruism on members of the community.

The next component of the model to consider is the production processes of Collectives receiving social funding.

2 The Process of Production

2.1 *Preliminary Considerations*

The autonomy of Worker Collectives is not like the atomistic autonomy libertarians hold sacred. It is not the liberty to pursue private self-interest as ruthlessly as they wish whatever the social consequences so long as no force or fraud is committed. The autonomy of Production Collectives in socialism is a social autonomy of social individuals within social organisations oriented towards social goals. The process of social investment outlined above sets the social goals. The annual reviews by Social Investment Centres, informed by the input of Community Activist Groups, Community Associations, Sector Agencies, and so on, along with the free choices of social agents to acquire (or not acquire) the Collective's output, all overseen by Democratic Assemblies and the citizenry at large, confirm whether those goals have been effectively pursued. Despite this extensive social oversight, Production Collectives retain considerable substantial autonomy. We have already discussed one form of this autonomy, the freedom of members of Production Collectives to collectively decide on the content of their requests for social funding. The other main form of autonomy is the freedom to decide collectively how to implement their social commitments when social funding has been granted.

Implementation requires answering a set of questions. What particular products is the Collective best suited to produce? What inputs will be required

to produce them? Can facilities and machine systems already in place be used? From what other Collectives could necessary raw materials or partially finished goods, machines, or other inputs not available in house be obtained? Are more members needed? How should the production process be organised, taking into account both technical efficiency in a narrow sense and the social good of enhancing the creativity and skills of members of the Collective?

All these issues are inherently political matters. The workplace is a form of political community, and the above issues go to the heart of its shared collective life. The issues also deeply concern the life of the wider political community (better, communities) in which workplaces are embedded. Maintaining the society over time is a collective political project. The social relationships mobilised within and across formally organised units of social production, and between them and users of their products, are political relationships, however 'natural' it might seem to those socialised in market societies to treat them as private transactions.

It would be no less mistaken, however, to assume that political relationships can only be the concern of centralised political authorities. In the dialectic of centralisation and decentralisation in this model of republican socialism decisions predominantly affecting the local level are in general made at the local level; decisions predominately affecting a wider level are generally made at that wider level.¹⁷ The questions posed above are answered by the members of Production Collectives collectively, either directly or through their accountable representatives. If answers were imposed on a Collective by a higher-level external authority, the core commitment of socialist republicanism to self-governance without domination would not be adequately actualised. *There can be no society of republican self-governance without worker self-governance.*¹⁸

If all decisions were made collectively, of course, the danger of a ruling managerial stratum emerging would be ruled out from the start. But workers would then likely have to devote considerable – unacceptable – amounts of time to become even minimally informed about all relevant matters and to deliberate about them. Workplace democracy does not imply that every decision must be decided by a referendum of the workforce. That may be suitable for smaller Collectives. In larger ones a manager could be elected by the workforce and delegated the authority to determine the specific products to be produced, the inputs needed to produce them, from where those inputs are

17 The principle of subsidiarity was affirmed as a part of the essential core of the socialist project in Chapter 4.

18 See Thompson 2018a, 2018b, 2020; Pannekoek 1936; Reuten 2023.

acquired, how the labour process will be organised, and so on. Or a Worker Council could be elected as a governing body of the enterprise, delegated to make most decisions, with those of central importance to the life of the enterprise left to collective deliberation and vote. When decisions are delegated to managers or Worker Councils, those members of the Collective will need to be released from other obligations, giving them ample time to become informed about the relevant matters. If, in the spirit of Marx's account of the Paris Commune, all those in positions of authority are elected (or perhaps rotated), subject to recall, and paid average workers' wages, then a fixed social division of status and power between managers and managed need not arise. A rule against serving consecutive terms in such a position would enable more workers to spend a part of their work lives in positions of (accountable) authority, while also helping to prevent the emergence of a stratum with concentrated power and prestige in the workplace.

When day-to-day decision-making is delegated to an elected Council or manager, members of the workplace community have the right to be informed of the Council's or manager's decisions and the reasoning behind them, as well as opportunity to discuss those decisions and reasons in regular forums open to all members. If authority is delegated to a manager, a Council of workers should still be formed to serve as an advisory body for the manager and to arbitrate disputes that might arise between the manager and particular members of the workforce.

Producing a specific product requires appropriate means of production. Some Production Collectives might retain suitable machinery, raw materials, and so on from earlier production processes. Others will have to be acquired from other Collectives, using funds allocated for that purpose by Social Investment Centres. If these suppliers could perfectly anticipate their unit costs and those using their output could perfectly anticipate the quantity they need to acquire, it would be a relatively simple matter for Social Investment Centres to simultaneously provide suppliers with an amount of investment funds sufficient to cover their costs of production and the Collectives they supply with sufficient funds to acquire necessary inputs. Such perfect foresight is, of course, impossible. Specific products and entire product lines may change over the course of a five-year period, and some of both are liable to become obsolete. As these changes occur, the costs of needed inputs (and the corresponding price of outputs) are likely to change from what had been anticipated when requests for social funding for the period were formulated.¹⁹ This, however, is

19 There may also be some purchases a Collective has already ordered prior to the begin-

only a serious problem when significant numbers of Production Collectives do not have the funds they require to acquire needed inputs because the cost of inputs has increased as products and entire product lines change or become obsolete, and there is no inherent dynamic for social costs to increase. The innovation system in socialism aims at product and process innovations that lower the environmental costs of production and use and the costs of time spent in socially necessary labour within formally organised units of production.

Socialism should not aim to be a perfectly functioning machine, a goal as oppressive as it is impossible. If the social needs associated with 'the full and free development of every individual' are addressed to a higher degree than feasible alternatives, that is more than enough. As long as prices of inputs roughly correspond to the funds received by Collectives to cover the costs of acquiring them, that is good enough. If there is a serious discrepancy, adjustments can be made after annual reviews. If an emergency were to arise requiring cost prices to be adjusted sooner, this could easily be done too.

It is important to stress again that neither the members of Collectives supplying inputs, nor the members of Collective using them, stand to gain personal income from price adjustments. Both have a shared interest in a system of 'pricing' enabling them to produce for social needs over time, given how crucial that is for being allocated investment funds in the next period.

The cost prices associated with exchanges between Worker Collectives may be based on rough estimates sometimes requiring adjustments. But as we have seen they allow the relative costs of producing different products to be taken into account more accurately than in the price system of capitalism, where important categories of social and environmental costs play little or no role, the most pressing social needs have little or no weight, and there are strong incentives and capacities to engage in pricing distortions.²⁰ I shall return to the role of 'money' and 'prices' in the socialist model in the following chapter.

We turn next to social relations in the production process.

ning of the period. If social investment is forthcoming, previous commitments must be fulfilled.

20 Consider, for example, the bogus magic of 'transfer pricing' that makes profits from production and sale in one region of the world market appear as they occurred in a different region, where taxes are lower, thereby making the superexploitation and transfers of value in supply chains invisible.

2.2 *Worker Empowerment: Comparisons and Contrasts*

Social production is never simply a technical matter. There is always a social dimension as well.²¹ In republican socialism, the capacity to labour is decommodified. It is not purchased in a labour market by private holders of money capital. A Production Collective is a community an individual joins, receiving a democratically determined share of its collective income. The decommodification of labour, combined with the democratic accountability of managers and Worker Councils to the workforce, generate a host of dominant tendencies in the labour process offering a sharp contrast to the most powerful tendencies of capitalism.

* The drive to automate burdensome forms of labour would tend to be stronger in socialism than it has been in capitalism. In the latter, the wages of many categories of workers are so low that it is not in the interests of managers or investors to replace them with expensive automating machinery.²² This consideration has no place in socialism.

* Automating machines can be used in a variety of ways. They can be employed in ways that deskill and speed-up the labour process. it would be wrong to think that production technologies in capitalism always and everywhere involve deskilling. Deskilling at one point often requires enhanced skills elsewhere. Further, capitalism is forcefully driven to generate innovations, and introducing innovations in the production process generally requires the development of new skills.²³ Nonetheless, from capital's standpoint dependence on workers' skills is forced upon it by present limits of technology. The dominant tendency in capitalist enterprises is to deskill occupations and increase stress in the workplace as soon as this is technically feasible. The reason for this is simple: the more the creative intelligence and embodied tacit knowledge of workers are mobilised, the more difficult it is to replace them, shifting the balance

21 In capitalism, production is never simply 'the production of commodities by means of commodities'. Living labour must be extracted from human beings, and living labour is not a commodity.

22 Benanav 2020a.

23 See Adler 1990; Smith 2000, Chapter 1; Handel 2012. From the standpoint of the socialist project, there is no reason to downplay the countertendencies to deskilling. If deskilling were the only tendency or the overwhelmingly dominant tendency in capitalism, essential preconditions for socialism would never emerge. A workforce bereft of skills would be unlikely to be capable of self-governance.

of power in the capital/wage labour relationship in favour of the latter. Struggles for better wages and work conditions then have a greater chance of success, threatening both the profits of owners and the control of managers over the production process. In the self-governing workplaces of socialism the social dynamic of technological change in the workplace would be quite different. Forms of automation making work more creative, challenging, fulfilling, and less stressful would tend to be selected far more than is the case in capitalism.

* Every advance in labour productivity in society as a whole poses a political choice: should the amount of time spent engaged in socially necessary labour in formally organised workplaces decline, increasing the time spent operating in the 'realm of freedom'? Or should the labour time members of the community spend in formally organised units of production be maintained, producing more goods to address universal and particular needs? In different places and different times different answers can be justified. Republican socialism – committed to both production for social needs and expanding free time – is open to both, with the latter becoming increasingly important as productivity advances. In capitalism, in contrast, productivity advances necessarily tend to lead to greater surplus labour time devoted to capital's ruling purpose, valorisation, even when human flourishing would be better furthered by greater time outside formal workplaces. Socialism eradicates that tendency. There is instead a strong tendency over time for advances in productivity to be used to free up time far more than has been (or could ever be) the case in capitalism.

* Spending one's entire work life in a narrow work specialisation is generally not consistent with 'full development'. On the other hand, for most people randomly drifting from one occupation to another would also be inconsistent with that goal. For many flourishing includes developing embodied competencies and tacit knowledge from extensive training and experience in a particular field of activity. Taking both considerations together suggests that it would generally be best for members of a Production Collective to develop specialised expertise in some aspect of the production process, while also spending a significant proportion of their work lives engaged in other forms of labour that do not require this special expertise. There are an indeterminate range of reasonable ways specialisation in a specific occupation could be combined with a range of tasks outside that specialisation. Tasks could be alternated in the course of a

workday, a work week, a work year, or some even longer period. Workplace self-governance allows this far more than capitalist workplaces where managers are agents of capital.

* ‘Full and free development’ implies that over the course of a lifetime everyone who wishes must have opportunities to explore a variety of occupations. Besides lifelong opportunities for education and training in their specialisation, every member of a socialist society should have a right to regular sabbaticals sufficiently long to explore at least the basics of a different field and develop at least entry-level skills. This would enhance their freedom to change careers and develop new capacities, should they so choose.²⁴

* The full and free development of ‘every individual’ also rules out condemning some members of Worker Collectives to a work life consisting of only the most boring (or dangerous or stressful) tasks. It rules out a rigid status distinction between manual and mental labour. Put positively, in socialism whenever feasible the least attractive jobs will either be rotated so that everyone performs them for some periods of their work life and not others, or jobs will be balanced such that in any given period everyone will engage in both less desirable and more desirable forms of work.²⁵

There may be cases, however, where neither option is feasible. Some forms of especially onerous labour, for example, may require physical traits or specialised training that not everyone will possess. In such cases it may prove helpful to allow income differentials that compensate those willing to do necessary work that others are not able to do. Even if most especially onerous tasks were rotated, there does not seem any special reason why a Collective should be prevented from granting those performing them a higher income for the time they are so engaged, if that is what its members collectively wish to do.

As stated previously, egalitarianism in the allocation of aggregate income to Production Collectives does not imply an equal distribution of income within them. The total allocation for member income is distributed within the Collective according to principles accepted after democratic deliberation, consistent with principles of solidarity affirmed in the socialist constitution. An equal distribution is one option. But differences in number of hours worked, in effort as

24 See Chapter 4, Section 4.2 above.

25 The importance of job balancing is stressed in Albert and Hahnel 1991a, 1991b, and Hahnel 2021.

perceived by co-workers, in the disagreeableness of tasks or in some other consideration deemed relevant by workers themselves, might justify divergences so long as they remained with bounds consistent with a solidarity society. Any resulting inequalities would be compatible with the solidarity relationships of socialism so long as 1) socialist enterprises rotate positions associated with different income whenever this is practically feasible; and 2) jobs are (re)designed to make each one as creatively challenging and minimally onerous as feasible; and 3) education and training programmes counteract any tendency for small groups to monopolise higher-rewarded skills.

If all those able to undertake better remunerated tasks had substantial equality of opportunity to do so, and if there were adequate educational and training programme providing everyone with substantively equal opportunities to acquire any needed qualifications (as there is in our model, where access to education is considered a universal₂ need), social inequalities would be a marginal matter, and not at the core of social life as they are in market systems. Everyone would still 'stand as an equal' in social life. Rigid status distinctions between those with specialist expertise and those without have no place in a solidarity society. The members of Worker Collectives must either collectively or through accountable representatives design the labour process to undercut the emergences of such distinctions.

I would like to end this section with some remarks about 'worker empowerment' in the labour process. In recent decades the business press devoted considerable space to praising teams of empowered and multiskilled knowledge workers, from the lean and flexible production workforce of post-Fordist manufacturing to the software coders mobilised by high-tech corporations.²⁶ There is a moment of truth in the hymns to empowered knowledge workers sung by contemporary apologists. As noted, the tendency to deskilling in capitalism should not be overstated, as it sometimes has been in Marxian labour studies. This correct point, however, is almost always covered over by a thick sludge of capitalist utopianism (in the bad sense of 'utopian' defined in note 5 of this chapter). The claim that the systematic shortcomings that have plagued capitalism in the past are now being overcome in its new phase has been made with depressing regularity since capitalism's emergence. Each time it has been proven illusory. Each time the previous disappointments are forgotten, enabling the claim 'This time it's different!' to be made yet again.

26 It is interesting to note how writers emphasising the advantages of the so-called 'knowledge economy' for workers in contemporary capitalism implicitly and very belatedly concede the accuracy of the Marxian critique of the alienated labour relations in the now superseded Fordist mass production. See Smith 2000, Chapter 3.

Some contemporary capitalist firms have acknowledged that their fate directly depends upon mobilising the creative capabilities of their workforce. But only a subset of workers is looked at in this way, generally workers in relatively privileged parts of the supply chain. Their 'empowerment' is all too compatible with living labour in other parts of supply chains being superexploited, or even suffering labour conditions approaching forms of slavery.²⁷

The results of the worker empowerment that does occur can be complex. The quality of products may be improved. Workers will prefer their creativity to be mobilised rather than suppressed. Sometimes a way of truly 'working smarter, not harder' is discovered. Nonetheless, the mobilisation of the creativity of even relatively privileged workers is limited and distorted, shaped by capital's imperatives.

Units of capital are forced by competitive pressures to try to increase profitability. Increasing the rate of exploitation is a tried and true strategy to that end. In some contexts, lowering labour costs by deskilling the labour force may hold the most promise of increasing the rate of exploitation. In other contexts, 'empowering' workers by challenging 'teams' to figure out for themselves (up to a point, at least) how to extract greater output from fewer workers, offers a better chance of increasing the rate of exploitation.

In the team model, members of the workforce tend to internalise peer pressure, in effect disciplining each other. No one wants to 'let the team down'. Knowing that working at a slower pace, or staying home when you feel sick, will just put added pressure on co-workers, you show up at work and work at the faster pace. Younger workers may not mind too much; a faster pace helps the day go by more quickly.²⁸ But over the course of their work lives, intensifications of the labour process impose a significant physical and psychological toll. From the standpoint of capital, the harm to workers' well-being is for the most part an externality that can be ignored. From the standpoint of the harmed workers, however, it is a social crime.²⁹ And it is a crime with a tendency for the number of victims to increase; if one firm gains a competitive advantage from a higher rate of exploitation by intensifying the work process, there is a pressure on competing firms to match that intensification. Also, when speed-ups of the labour process of some workers leads to the unemployment of others, as it does in so-called 'lean' production, this is hardly conducive to the 'empowerment' of workers as a class.

27 See J. Smith 2016.

28 Wanting the day to go by quickly is often itself a troubling sign, but we will leave that aside here.

29 Holdren 2020.

Even the most privileged teams of empowered knowledge workers are never granted anything approaching autonomy from domination. The rhetoric of 'empowerment' and 'autonomy' in the workplace has been amplified at the very time electronic surveillance of the labour process has granted representatives of capital power to monitor greater than any panopticon. When workers are forced to internalise the manager's gaze, talk of 'worker empowerment' is a misuse of language.

Limitations of 'worker empowerment' in contemporary capitalism are systematic, rooted in the production and property relations of capitalism. Besides granting investors the right to appropriate the retained earnings of the firm and allocate them as they wish, those relations give them the right to appoint managers as their agents. Managers are delegated the power to make decisions regarding the production process, consistent with their fiduciary duty to investors. In the principal/agent relationship at the heart of capitalism, investors, and not 'empowered' workers, remain the 'principals'. An investor class with an even of modicum of instinct for self-preservation will be sure to instruct managers to keep the empowerment of 'empowered' work teams within fairly strict limits.

From the standpoint of republican socialism, a series of critical questions need to be asked. Why should the meaning of worker 'empowerment' be limited to (often slight) modifications of tasks in the labour process and the allocation of those tasks? Why should it not extend to the entire range of decisions within a unit of production, including which product lines should be produced, what mix of inputs would be most appropriate, what process and product innovations should be introduced, the rotations of tasks within the enterprise as a whole (and not just within a small work team), and the training that is available within the enterprise? Last but not least, why shouldn't the power to select managers be incorporated as an essential dimension of 'worker empowerment'? In a principal/agent relationship only the principal is fully empowered.

In socialism, worker empowerment is an end in itself and not merely a means to further valorisation in certain limited contexts. Providing meaningful creative work to the greatest feasible degree is itself an essential universal social need. The category of worker 'empowerment' must be taken in a far broader sense than any variant of capitalism allows, extending to every dimension of the production process. This includes making the republican principle that legitimate exercises of authority rest upon the consent of those over whom the authority is exercised a material actuality in workplaces.

Once again, this does not imply that everything happening in a Worker Collective must be subject to Collective-wide deliberation and voting. It does mean that when decisions are made by managers or Worker Councils, those making

them are the elected and revocable agents of the collective workforce, deciding about a limited range of issues. Only then will talk of 'empowerment' consistently be more than an obfuscating code phrase for an enforced intensification of the labour process.

The members of self-governing workforces have every incentive to mobilise their collective intelligence to design work processes intelligently without imposing physical or psychological harm on themselves or their co-workers in either the short or the long term. Resulting improvements in productivity need not lead to unemployment, temporary or otherwise, as they so often do whenever there are profits to be won from reducing wage costs. If greater output of a particular product were not needed, the creative collective intelligence the workers whose labour was freed up could simply be directed to the production of other goods addressing democratically determined social needs, or to an expansion of the realm of freedom.

2.3 *Budget Constraints and Employment in the Socialist Production Process*

Full worker 'empowerment' and self-governance does not mean that a Collective can pursue its perceived particular interests unconstrained by other considerations, at least not if it has hopes of receiving social funding in the future. Its products must align with social needs and the priorities among them. If a Production Collective does not address social needs satisfactorily as judged by those who use its outputs, or if Sector Agencies discover that its production processes are significantly less effective than comparable processes at comparable workplaces, measures must be taken to reconcile the particular Collective with the universal good of the community it is a part of.

These measures may be as mild as a recommendation in an annual review that a Collective adopt the 'best practices' of other enterprises producing similar products for the same sector, taking advantage of the extensive support offered by Sector Agencies and innovations offered by the system of Research Collectives.³⁰ But if a Collective has proven incapable of addressing democratically determined needs effectively over the course of an extended period, it

30 The term 'best practices' refers to a number of incommensurable dimensions of the production process. Some can be easily and precisely measured (output per hour, use of depletable resources per year, and so on). Others cannot (for example, the degree to which creativity in the labour process has been increased in a given timeframe). Nonetheless, sufficient information regarding the latter can be obtained indirectly (e.g. through qualitative research making use of interviews) to enable reasonable judgements. While there are general criteria for social investments, there are not criteria for what counts as 'best

will have to be dissolved.³¹ In the most extreme case of dysfunction a Collective may have to be dissolved before the next extended planning period. It would not be wrong to say that this is a form of competition among enterprises. But it is a 'competition' to address social needs effectively, qualitatively different from the competition for profits in market societies. Anyone opposed to the former should recall Kornai's convincing claim that the lack of 'hard budget constraints' was a fatal flaw of state socialism.³²

From the perspective of the members of a Collective whose funding has been withdrawn, it may seem that an alien power, an external force, has imposed sanctions on them. But this is not the proper way to categorise the situation. Worker Collectives are social creations for a social purpose. They come into existence and are maintained in existence by social investments granted on the strength of members' commitment to address a subset of social needs satisfactorily. Social processes of evaluating whether that commitment has been fulfilled are fully transparent, incorporating a variety of individuals, groups, and social organisations with a wide variety of perspectives. Evaluations are expressed in public documents providing public justifications of assessments of the Collective's past performance and future prospects. The entire process is subject to oversight by Democratic Assemblies, judicial review, and public scrutiny. The result is a structural tendency for the units of production that effectively address social needs to remain in operation, and for those that do not to eventually be dissolved. The members of Collectives in the latter group will undoubtedly suffer some disruption of their lives. But 'production

practices' that apply at all times and in all sectors. The members of Sector Agencies are workers in the sector randomly selected from the set of those nominated by co-workers. They have relevant formal and informal knowledge of the sector as well as the respect and trust of their co-workers. They have access to all available relevant data about production processes and outputs in the sector, as well as the right to visit facilities when they feel it would help them understand challenges. They are, in other words, generally able to go beyond vague generalities and specify what the best practices are in the given sector at a particular point in time.

31 Any still usable means of production possessed by a dismantled Collective can be assigned to the Collective (or Collectives) deemed by the relevant Sector Agency able to make best use of them in production for social needs.

32 Kornai 1992, pp. 140–5. Bernes argues from a standpoint closer to the present author's that the systematic problems of the USSR had less to do with collecting and processing the data required for central planning (Hayek's worry) than with dismantling the coercive incentives of hard budget constraints while leaving only violence and crude incentives in their place (Bernes 2020; see also Arthur 2002). As Bernes notes, the problem of budget constraints has not been adequately emphasised in the work of digital socialists such as Morozov (2016), Phillips and Rozworski (2019), and Srnicek and Williams (2015).

for social needs' does not imply a mandate to provide social resources indefinitely to units of production that do not contribute to addressing social need effectively.³³

The burdens from shifting investments in socialism will be nothing like the countless personal tragedies imposed on workers, their families, and their communities by capitalism when capitalist firms are shut down. Ex-members of dismantled Collectives retain access to collective community goods, as well as a right to goods and services addressing basic (universal₂) needs. Education and training programmes will be provided to improve their prospects of joining another Collective.³⁴ While they are participating in these programmes a relatively high fraction of average worker income can be offered, enabling the acquisition of particular goods. The social innovation system encouraging the constant formation of new Collectives discussed in later chapters is also relevant here. As new Collectives grow, they need new members. Finally, as a last resort an Agency established by the Democratic Assembly can oversee the formation of *ad hoc* local Collectives providing an opportunity to engage in meaningful social labour and an income for the acquisition of particular goods to those who are not members of an existing Collective. These *ad hoc* Collectives could be assigned one-off tasks in the community.³⁵ In this manner republican socialism can be a 'full employment economy' even with hard budget constraints.

33 A Collective whose funding is withdrawn must have a right of appeal. If decisions to withhold further funding are acknowledged as practical judgements, and not the results of applying algorithms to objective quantifiable data, would that mean that arguments for reversing decisions to withhold funding would tend to be strong enough to erode effective budget constraints? Not if there is ample relevant quantifiable data (e.g. the output of a given Collective consistently cannot be sold at its cost price, its production processes consistently leave an unsustainably large environmental footprint, or innovations that have proven superior have not been adopted) and relevant qualitative data (such as surveys of users consistently register high levels of dissatisfaction with a Collective's products, or regular reports from workers in Sector Agencies of a lack of interest in making improvements). The lack of an objective quantifiable general rule analogous to that governing capitalism ('If the rate of return isn't x percent [x varying in different contexts], shut it down!') doesn't mean that decisions must be arbitrary and subjective.

34 Despite the high degree of uncertainty regarding R&D, Research Centres specialising in developing innovations can make reasonable anticipations of the education and training most likely to be required by Production Collectives in the future, enabling (re)training and further education to be focused on areas of importance for production for social needs in later periods.

35 The income should be below the average income from socially necessary labour in formally organised units of production, to encourage a continued search for a position within

Individuals do not merely have opportunities to engage in socially necessary labour; they have a right to do so. Providing every individual with attractive opportunities for meaningful work is part of the socialist project. The tie between investment funds in an area and its population size is a precondition for accomplishing this; the more people there are in a given area, the more funds are available to establish and maintain Production Collectives. But no Collective is mandated to accept every request to join. What if the process of social investment fails to result in everyone who wishes to become a member of some Production Collective being accepted in one? The problem can be taken as evidence suggesting that training and education programmes may need to be expanded. In the short-term, the longer the time spent in education and training, the less pressure on Worker Collectives to absorb new requests for membership. In the medium-to-long-run, the more training and education, the more attractive those requesting to join will be to present members. Also, expanding training and education enhances the creativity of the collective workforce, increases labour productivity, and encourages innovative dynamism. If the problem still persists on a significant scale, it is evidence that the work hours counting as 'full time' may have to be lowered (without lowering average worker income). Everything else being equal, if hours are lowered sufficiently, Collectives will need to expand their membership in order to maintain the desired level of output.

When all is said and done, of course, the members of a Collective that does not obtain social funding are likely to be disappointed and perhaps angry. If they accept that production should be for social needs, and if they cannot make a compelling case that withholding investment was unreasonable given that goal and the evidence at hand, they may still disagree with the decision and feel subjectively alienated. But this would not be an alienation from the socialist project itself. And it would not be analogous to the objective alienation in capitalism, where human ends are subordinated under the alien end of capital accumulation.

2.4 *The Question of Incentives*

Impersonal (structural) coercion is still coercion, even if no one is putting a gun to another's head. In capitalism, workers are coerced into wage labour by the need to obtain money for means of subsistence. In socialism, the provision of

a regular Production Collective. The tasks of ad hoc Collectives should be one-offs since tasks addressing recurrent social needs should be met by formally organised Collectives.

basic needs removes that coercion. Do social agents then have an incentive to contribute the labour necessary in socialism to the necessary extent?

The general question of incentives can be broken down into four more specific issues. First, why labour at all if all basic needs are adequately addressed? Even if some choose to keep busy in this way, will people be willing to join Production Collectives in sufficient numbers for the model to be viable?

Second, why assume people would be willing to take on the intensive education and training required for occupations requiring intensive education and training for many years (doctor, engineer, and so on), when the rewards in terms of income are relatively low (significantly less than in capitalism)? The question retains its force even if the education and training were provided for free in socialism, along with a relatively generous stipend over the period of education and training.

Third, why would members of Production Collectives exert the level of effort required for the socialist model to be viable? Why wouldn't at least a subset of members conclude that it is rational to exert as little effort as possible in labour processes and 'free ride' on the exertions of others? Of course, if this subset included many members, the collective result might not be what any one of them wished: a Collective denied social funding in the future. But so what? Couldn't they then just join another Production Collective and act in the same manner? The problem is compounded when we anticipate that those who do not initially have a disposition to shirk will not want to be suckers. When others are not doing their fair share, why should they continue to do theirs, let alone make up for what others are not doing? From this point of view, won't units of production in the model of socialism outlined here be as prone to stagnation, low efficiency, and a lack of innovative dynamism as so many enterprises were in so-called state socialism?

Finally, will the exit rights of those engaged in social labour in this model of socialism lead to chaos? Freedom of occupation is affirmed as a right of republican socialism, as it is in capitalism. In capitalism, however, the formal freedom of occupation is typically combined with significant *de facto* limitations on movement. Debts, for example, increase the penalty of leaving employment when other jobs offering comparable or better pay are not on offer. Pensions and seniority are not generally transferrable. In socialism, in contrast, freedom of occupation has substantive actuality due in part to the absence of such penalties. Will the right of exit all members of Production Collectives have in the model lead to too much social instability?

We must keep in mind that biological evolution has *not* made the ruthless pursuit of narrow private self-interest (defined in this context as seeking to benefit from society to the greatest possible extent while minimising one's own

social contribution) an essential determination of 'human nature'. If it appears otherwise, that is due to an ethos shaped by capitalist production and property relations. Evolution has given us a capacity to cooperate.³⁶ That is not, however, a sufficient answer to incentive questions. Evolution has also resulted in a capacity to act in a manner that makes those questions inescapable.

It also will not do to simply assume that a high degree of revolutionary enthusiasm can be maintained indefinitely, generating a general willingness to make self-sacrifices for the common good. Perhaps in the immediate aftermath of a transition to socialism such a high degree of enthusiasm will be present. Sooner or later, however, revolutionary fervour will weaken in the face of the routines of everyday life. No plausible model of socialism can be based on an uncritical and unwarranted assumption that the fervour can be maintained indefinitely.

Nor can incentive issues be avoided by putting our faith in a solidarity society establishing a general ethos that everyone who is able to do so should contribute their fair share of socially necessary labour. It is reasonable for others to expect us to contribute time and effort to help produce goods addressing their needs, just as we expect them to help produce goods for us. It is reasonable for those benefitting from the shared cultural heritage of the past today to accept a duty to maintain and enhance this heritage for future generations. In a socialist society these beliefs would not rest on merely abstract moral values. Nor would they be based on a sense of fairness deeply rooted in our sociality. They would be materially embedded in the social practices of socialism, nurtured by the general culture and specific cultural policies. This would give an egalitarian ethos a concrete actuality lacking in capitalist market societies. An ethos of shared duty, however, is fragile. Some indeterminate number of instances of free riding would undermine it.

We must, then, consider the four incentive issues raised above, beginning with the question of the general incentive to contribute social labour when the coercive mechanisms of class societies and command economies are absent.

A first consideration is that the assumption that external coercion is required to motivate work overlooks how human beings are social animals. Working with others on socially necessary tasks provides an important site for the social connections of a fulfilling life. We must also recall that in a system of worker self-governance, there will be a high priority to design work processes to mobilise the intelligence and creativity of all members of the workforce. The self-affirming and enriching qualities found in relatively few forms of work

36 See Bowles and Gintis 2011.

today will spread to many more occupations. As they do, work comes closer to fitting what Marx described as 'life's prime want', rather than a cost to the labourer to be avoided or minimised.³⁷ Human beings are not biologically programmed for indolence. We are what we do, as Hegel insisted. We should not assume that shirking would be a strong tendency in a workplace where jobs are designed to reinforce our sense of self and the mutual recognition of others, rather than to maintain the domination and exploitation of those hired to make profits for others.

What of especially onerous or boring work that cannot be made easier or more intrinsically interesting? In socialism it will tend to be designed or automated away to the greatest feasible extent. What remains can either be rotated or incorporated as a relatively small part of the responsibilities of every member of a Worker Collective. The more temporary an onerous or boring work assignment, the smaller its portion of total tasks, the weaker the impulse to avoid performing it.

The politics of time in socialism is also relevant in this context. As noted previously, every advance in labour productivity poses a political choice: Should the amount of time spent contributing to formally organised enterprises in the realm of necessity be lowered and time spent in the realm of freedom correspondingly expanded? Or should the time members of the community spend in formal organisations producing universal and particular goods be maintained, enabling more goods to be produced and consumed? There is no one correct answer for all places and all times. There is, however, a wrong answer, the one given in capitalism, where productivity advances are primarily used to increase the time living labour spends in surplus labour producing surplus value for capital. This is the default setting in capitalism even when human flourishing would be much better furthered by greater time spent outside formally organised workplaces, and even when planetary conditions favourable to human flourishing are threatened by the depletions and wastes generated by accelerated commodity production and consumption. In socialism, where the ruling purpose of society is no longer valorisation, the politics of time is transformed. Advances in productivity are used to free up time far more than has been or ever could be the case in capitalism.³⁸ In the model of republican socialism, the international Democratic Assembly sets the amount of time adults who

37 Marx 1989.

38 In a society of 'freely associated producers', Marx states, production would be organised to foster '[t]he free development of individualities, and hence not the reduction of necessary labour time so as to post surplus labour, but rather the general reduction of the necessary labour or society to a minimum, which then corresponds to the artistic, scientific, etc.

are able are expected to devote to socially necessary labour, with the amount lowered over time as essential needs are met and productivity increases. (Perhaps 25 hours a week would be a reasonable amount today.)³⁹ The relevance of this aspect of the socialist project here is straightforward: the less onerous the time commitment demanded for socially necessary labour, the less tempting it is to not do one's fair share.

None of these considerations is likely to satisfy a sceptic. The question remains: If universal needs are adequately addressed, including the 'basic' needs all individuals require for a decent life, why should we assume that sufficient numbers of people will freely choose to contribute to Worker Collectives engaged in production?

The answer is implicit in the question: *few will be satisfied with simply having universal needs met, even when that category is defined much more broadly than it is in capitalism.* Individuals and groups in socialism will have their own particular interests, projects, life goals. Carrying out almost all of these interests, projects, and life goals will require other sorts of goods besides those addressing universal needs of the community as a whole and the basic needs every individual has as a distinct agent with but one life to live. In the model of socialism presented here, income is required to gain access to particular goods. Contributing socially necessary labour within a formally organised workplace is the main way this income can be obtained in the model. Those able to contribute to social labour but choosing not to will be very constrained in the pursuit of particular forms of life requiring access to particular goods and services. Structural coercion may be overcome, but there is still a powerful material incentive to contribute social labour as a member of a Production Collective.

From this perspective the second issue can be reformulated: would material incentives sufficient for most occupations be adequate for those that require special commitments to intensive forms of training and education for extended periods of life? Some evidence is provided by Cuba that jobs mobilising creative intelligence while helping others provide inherent value and are widely desired for that reason, even when they require extensive education and training. Cuba has the highest per capita number of medical doctors in the world despite the absence of high-income differentials.⁴⁰ Strikingly, even in the US

development of the individuals in the time set free, and with the means created for all of them' (1973, p. 706).

39 In this context the need to reduce privately undertaken socially necessary reproductive labour by socialising child rearing, cooking, cleaning, and so on, to a significant extent must be stressed as well (see McNally 1993, p. 191; Brenner 2000; and Giménez 2019).

40 World Population Review 2024.

there is strong evidence that those engaged in creative scientific endeavours are generally motivated more by rewarding work and recognition from their peers than by accumulating personal wealth.⁴¹ It is the less challenging positions that are more difficult to fill. The more jobs are redesigned to make them more creative, the less motivation will be a problem. More specifically, the more skill variety, task identity, task significance, autonomy, and feedback, the more intrinsically motivating the work.⁴²

This brings us to the question of effort. Why should we assume that those who join Production Collectives will be motivated to extend the effort required to maintain a prosperous and dynamic society? Why won't attempts to free ride on the efforts of others be great enough to undermine the socialist model sketched in this book?

We can begin again with a response that is compelling and yet unlikely to convince sceptics. In republican socialism, requests for social funding, the specific products enterprises plan to produce, the mixes of inputs used in their production, and the organisation of labour processes are all made by the members of Production Collectives collectively or by their elected and directly accountable agents. This arrangement is obviously quite different from the case where crucial decisions are made by agents of a principal (the investor class) external to (alien from) the workforce. To resist carrying out a plan of action you have yourself helped make is a pragmatic contradiction of sorts. While it is possible to remain in an unnoticed pragmatic contradiction indefinitely without discomfort, it is far more difficult to reject the results of a process you consciously affirm as legitimate. People are transformed by social circumstances, just as social circumstances are transformed by people. There is ample evidence that increased worker participation increases efficiency and effort today.⁴³ Why isn't it reasonable to think it will do so tomorrow as well?

For those left unsatisfied by this response, here is another: there is no mandate in the model that the income of all members of a Production Collective must be equal.⁴⁴ Decisions regarding the allocation of income in work-

41 Sundgren, Dimenäs, Gustafsson, and Selart 2005.

42 Hackman and Oldham 1980. An excellent discussion of this issue is found in Adler 2019, Chapter 4.

43 Pérotin 2012.

44 The idea that an equal distribution on the individual level fits best with the ethos of socialism has been strongly argued by G.A. Cohen (see Cohen 2009). In my view, socialists must be open to the possibility that a model of socialism incorporating strict equality of distribution is utopian in the bad sense of the term and will not in fact further the 'ruling purpose' of the full and free development of every individual.

places is decentralised, made by the members of the given Collective. If free riding and shirking turn out to be problems, those forms of action can be discouraged by lowering the income of those engaged in them; those above average effort in the view of their co-workers can be rewarded with higher income.

There is, of course, a danger that these comparative judgements and disparities of income will undermine workplace solidarity.⁴⁵ On the other hand, if shirking becomes widespread, that too undermines solidarity. In general, penalties should be inflicted only in extreme cases of shirking, and bonuses granted only in exceptional cases of extra effort. As we move away from obvious outliers controversies become more likely, more surveillance is required, and the dangers of undermining solidarity in the workplace grow.⁴⁶ Perhaps an acceptable balance of the competing considerations can be reached if the workforce collectively agrees on objective measures for effort whenever possible, if income disparities are not excessive, and if there are safeguards protecting against bias in judgements of effort.⁴⁷ Since the amount received by the Collective to distribute as income is fixed by the social average, and some minimal amount for members is fixed by law, income disparities will not be extreme. There is ample empirical evidence that disparities do not need to be extreme to have motivational force.

Finally, there is the question whether the material security enjoyed in socialism would lead too many social agents to leave Production Collectives too quickly and too often to avoid generalised economic chaos.

Familiar inducements to remain in a position will continue in socialism. Remaining in the same workforce allows friendships to deepen, and there are forms of mutual respect among peers that can only be won after years of working together. Workers raising a family will still consider the social costs to their

45 This point is forcefully argued in Hudis 2013, 2019.

46 The model of socialism presented here does not include the attempt of workers to measure the effort levels of every individual worker and award income based on the results, a feature of the parecon model presented by Hahnel (2021, pp. 109–17). That practice is too likely to generate alienation among co-workers to count as an acceptable feature of socialist self-governance.

47 Democratic Assemblies have the responsibility of defining unacceptable mistreatment of individuals and groups such as discrimination in the allocation of income. Community Activist Groups can be formed to monitor the treatment of members of Worker Collectives. A socialist judicial system must also be in place to adjudicate cases where a minority of workers believes that the principle of distribution accepted by the majority disadvantages them in a manner inconsistent with the demands of solidarity.

children of losing friends and familiar surroundings when parents move to work elsewhere. Most importantly of all, perhaps, the greater 'voice' workers have in self-governed firms lessens the need for 'exit'.⁴⁸ If these considerations prove inadequate, it is always possible to tie members' income to seniority, providing a material incentive to remain.⁴⁹ We may conclude that a substantive right to exit will not generate a structural tendency to chaos.

What if despite these inducements freedom of occupation leads to a general mismatch between the occupations people choose to pursue, and those needed in the society? It would be easy enough to naïvely assume that the ethos of solidarity and the permissible income differentials in socialism will automatically result in choices of occupation that perfectly match social requirements. But that assumption seems more an expression of hope than a reason for the less hopeful to agree. A universal requirement for all individuals of a certain age to devote a relatively short period of their life to public service in **Citizen Service Collectives** could be imposed. Many capitalist democracies have instituted this sort of social obligation; none have thought that it eroded their democratic character. There is no reason why a republican socialist society couldn't introduce a similar programme without eroding its far superior democratic character. Democratic Assemblies could assign these Collectives important social tasks that would not otherwise be fulfilled.⁵⁰ But those enlisted may not have the collective capacity to produce the needed goods or services effectively. What then?

The inducements to engage in social labour both in general and in specific forms are significant in the model of socialism we are discussing. The cases where they are insufficient will be few. In those cases, I fear that the only acceptable response is that as a society we simply do without the good or service in question. Nothing would more obviously undermine the commitment to build a society whose ruling purpose is the full and free development of every individual more than resorting to forced labour. Material incentives and penalties incompatible with a social world where all stand as equals must be avoided as well.

Do the incentives for contributing to social labour in formally organised workplaces effectively amount to *compelling* social agents to labour? In other

48 Hirschman 1970.

49 This is an essential feature of Saros's model of socialism. See Saros 2014, Chapter 7.

50 If there are not enough unmet needs to warrant universal service, there could be a random selection from all those of the relevant age. Those serving should be granted average worker income.

words, is denying access to goods required to effectively pursue particular ways of life to those able to contribute but choosing not to 'coerce' in a normatively relevant sense of the term? The answer must be no. Those who do not contribute to social labour are not deprived of access to universal₁ collective goods and goods addressing their basic (universal₂) needs. No ruling class or stratum, no dominating political elites, no impersonal alien power, forces them to contribute labour to Production Collectives. When inequalities of income are permitted within Production Collectives with the result that those deemed shirkers by co-workers receive less than average worker income, they cannot plausibly complain of being coerced. All members of Production Collectives participate as equals in self-governing. There is no exploitation of labour by a ruling economic class, a political elite, or an impersonal power. Exorbitant income and wealth are not generated by private ownership of social productive resources; low wages are not imposed by relentless competitive pressures. Income disparities are allowed only because they further production for social needs. As long as they are kept within appropriate bounds, they are means to a solidarity society rather than measures inconsistent with one.

Much more needs to be said about production processes in socialism, needless to say (and more will be said in Chapter 10). But the goal of this work is to present a model of socialism in sufficient detail to affirm that it would be both feasible and a world historical advance. As incomplete as the above presentation undoubtedly has been, it has hopefully contributed to that goal.⁵¹

We turn now to the next stage in the account of production for social needs on the local level.⁵²

51 Before leaving this section, it is important to note again that production in formally organised units of production is only a part of the 'realm of necessity' in socialism. Socially necessary labour also includes socially necessary care labour (raising young children, caring for the infirm and elderly) performed informally in households. (When care labour is performed in a formal organisation, that organisation is a Production Collective, producing an especially important type of service). And it includes the labour within other formal organisations of collective self-governance, such as Community Associations, Democratic Assemblies, and so on. As the socialist constitution sketched in Chapter 4 acknowledges, all forms of socially necessary labour must be socially acknowledged, not just those within formally organised units of production and distribution. All those engaged in full-time informal care labour, and all those contributing their social labour to other institutions of self-governance besides Production Collectives, receive average worker's income in this model of socialism.

52 While a linear exposition is convenient, it must always be kept in mind that in a functioning socialist society, different components of the model will be interacting simultaneously.

3 The Acquisition of Consumption Goods

We began with the democratic determination of social needs and priorities among them. We then moved to the formulation, submission and evaluation of proposals from Production Collectives to produce goods or services addressing those needs over the course of an extended period, the social assessments of these requests, the subsequent allocation of social investment funds, and the decisions within Production Collectives receiving social funding regarding the specific products to be produced, the mix of inputs used to produce them, the suppliers from whom those inputs are acquired, and the social organisation of the production process. The final phase to consider is the acquisition of consumption goods by their final users. (The acquisition of production goods by Production Collectives from suppliers has been discussed in the previous chapter). Acquisition of final products may occur directly from their producers or through the mediation of Collectives specialising in distribution.

The acquisition of products for consumption falls into two broad groups: the acquisition of goods for collective community consumption and the acquisition of goods for the consumption of individuals or associations of individuals. The latter can in turn be considered under two headings, depending on whether the need being addressed is a 'basic' need that everyone (or so close to 'everyone' as to not make a difference from the social standpoint) has or a particular need that is not universally shared.

3.1 *Community Agencies and the Acquisition of Universal₁ and Universal₂ Goods for Social Consumption*

In this model of republican socialism, Democratic Assemblies establish and oversee local **Community Agencies** in charge of acquiring goods that address universal₁ needs (infrastructure, etc.) as well as universal₂ needs met by free provision of appropriate goods (public housing, public health care, and so on). Perhaps half of its members could be appointed by the Assembly on the basis of special expertise in the relevant area (developed in Production Collectives, Research Centres, Community Associations, Community Activist Groups, and so on), while half could be selected by lot from the community. Once it is decided what percentage of the locality's total investment funds is to be devoted to providing social consumption goods, the Social Transaction Centre maintaining accounts of transactions simply adds an amount to the Community Agencies's accounts projected to cover their costs of acquiring those universal goods from Production Collectives receiving social funding to provide those sorts of goods. After the Community Agencies make their decisions, the

Social Transaction Centre simply reduces their accounts by the relevant prices and adds the same amount to the accounts of the Production Collectives the social consumption goods are acquired from.

3.2 *A Social Bequest and the Acquisition of Universal₂ Goods for Individual Consumption*

Some goods addressing universal₂ ('basic') needs will be acquired by individuals as if they were particular goods meeting particular needs, rather than universal goods addressing needs that everyone has as individual human beings. In the society as a whole there will be some average amount of income required to acquire the goods falling in this category, based on past data and future projections. This amount of income will be provided by a *social bequest* distributed to all citizens.

The use of the term 'bequest' here requires explanation. In the chapter on the socialist constitution, I discussed how the social wealth produced at a given time utterly depends upon the collective heritage Marx termed the 'general intellect'. Its contribution to the production of social wealth in the present is literally incalculable and continually growing. A constitutional right to share in this common heritage was proposed in Chapter 4. The proposal here gives that abstract principle material actuality.

The general intellect, of course, does not play a role in producing only one category of goods. It permeates all dimensions of social life, including the production of all categories of goods. But some specific way of granting everyone a share of the wealth created due to our collective inheritance from those who have gone before us is in order. If the income required on average over a period of time to acquire (at cost prices) the basic goods not provided as free public goods or services were placed in the account of every member of the society at the beginning of the period, that would socially acknowledge how much what we can do today depends on what those before us have done in the past. It is certainly a far more appropriate practice than allowing private holders of capital and intellectual property rights to privately appropriate so much of the wealth created thanks to the general intellect.⁵³

53 In some ways the proposal is analogous to calls to establish basic income guarantees. But the latter are intended to compensate for the stagnant wages of contemporary capitalism, to protect against declines in aggregate demand from automation, or (for right-wing advocates) to replace welfare programmes. None of that is similar to the call to establish a 'social bequest' all are entitled to, a share in the benefits of our collective cultural inheritance (including, but not limited to, scientific-technical knowledge).

Of course, it is difficult to estimate the ‘prices’ of these goods in the aggregate and to ensure that the aggregate income used to acquire them perfectly balances those costs. But a reasonable approximation will suffice. A Social Transaction Centre with access to all relevant information about prices will be able to determine a reasonable approximation.

The mechanisms that capitalist states have employed to provide basic goods have proven to be inherently problematic. In some cases, a division of the central government bureaucracy is assigned responsibility for producing and distributing the goods in question. These bureaucracies are all too often inefficient and arbitrary in their operation, unaccountable to those they serve. The other main arrangement is to subcontract production and distribution of a universal₂ good to private for-profit companies. For-profit companies tend, unsurprisingly, to sacrifice public interests for the sake of their own profits.⁵⁴ Both approaches tend to not address the most important social needs effectively. It would be absurd to assert that no problems will emerge after the reign of capital has been dismantled. An alternative social form of provision must be anticipated in enough detail to show how it would overcome the most serious problems besetting capitalism without generating comparably serious difficulties of its own. The model of socialism presented here 1) outlines a feasible process for determining what the general commitment to provide basic needs means in specific concrete circumstances and 2) describes how it would be possible to carry out that commitment without the alienation that necessarily tends to accompany both bureaucratic provision and privatised provision. Community Activist Groups, Community Associations, and public forums all make essential contributions to that end, giving voice to the users of universal₂ goods in the indicative planning process and in subsequent social assessments of its effectiveness. The social bequest outlined above puts some decisions regarding the consumption goods that might best address universal₂ needs directly in the hands of those whose needs must be addressed.

3.3 *The Acquisition of Particular Goods for Individual Consumption*

The acquisition of particular goods to aid individuals and associations of individuals for living the sorts of lives they have chosen to live remains to be considered. They too will be acquired through decentralised exchanges between producers (or distributors) and final users. How much individuals or households or other associations can acquire is a function of the accounting income they receive. (If that term is too reminiscent of market exchanges, readers are

54 See Christophers 2020, Chapter 5.

invited to replace it with 'points' social agents have at their disposal that can only be used to acquire particular goods or universal₂ goods acquired as if they were particular goods.)

One source of income has been discussed at length, that received by members of Production Collections for their contribution of social labour. This amount is determined by democratic decisions within the Collective regarding how to allocate the sum of funds granted for the income of its members, the amount fixed by multiplying the number of full time (or full time equivalent) members by the average worker income as set by the recommendation of the international Social Transaction Centre and approved by the international Democratic Assembly.

Two other sources of income have been mentioned previously as well. There is income received as a member of other sorts of Worker Collectives besides Production Collectives, the institutions of collective community self-governance (Democratic Assemblies, Community Associations, Producer Review Boards, Sectoral Agencies, Social Investment Centres, Research Centres, Community Agencies, Citizen Service Collectives, and so on). Here too the amount an individual receives results from a democratically accepted distribution of the aggregate sum allocated to the organisation for the income of its members (again determined by multiplying the number of full time (or full time equivalent) members by the average worker income set the international Democratic Assembly).

There is also the average worker income received for contributing socially necessary care labour outside formally organised Production Collectives, and the fraction of average worker income received by those participating in education or re-training programmes after a Collective one had been a member of has been dismantled, or after joining an *ad hoc* Collective when no other position is on offer.

Anticipating Chapter 11, we can add to this list of income sources the grants and bonuses awarded for contributions (potential and actual, respectfully) to socially important commons-based peer production projects. The Democratic Assembly determines which projects have this special status, Research Centres specialising in the relevant fields select those receiving the grants or bonuses, and the Transaction Centre distributes the funds.

A simplified picture of the flows of investment and income is provided in Figure 8.

In an abstract and totally imaginary ideal case, over the course of a given period the aggregate sum of the 'prices' of particular goods (identical to their social costs of production) would exactly equal the aggregate sum of the income received. While this is not possible, it can be reasonably approximated.

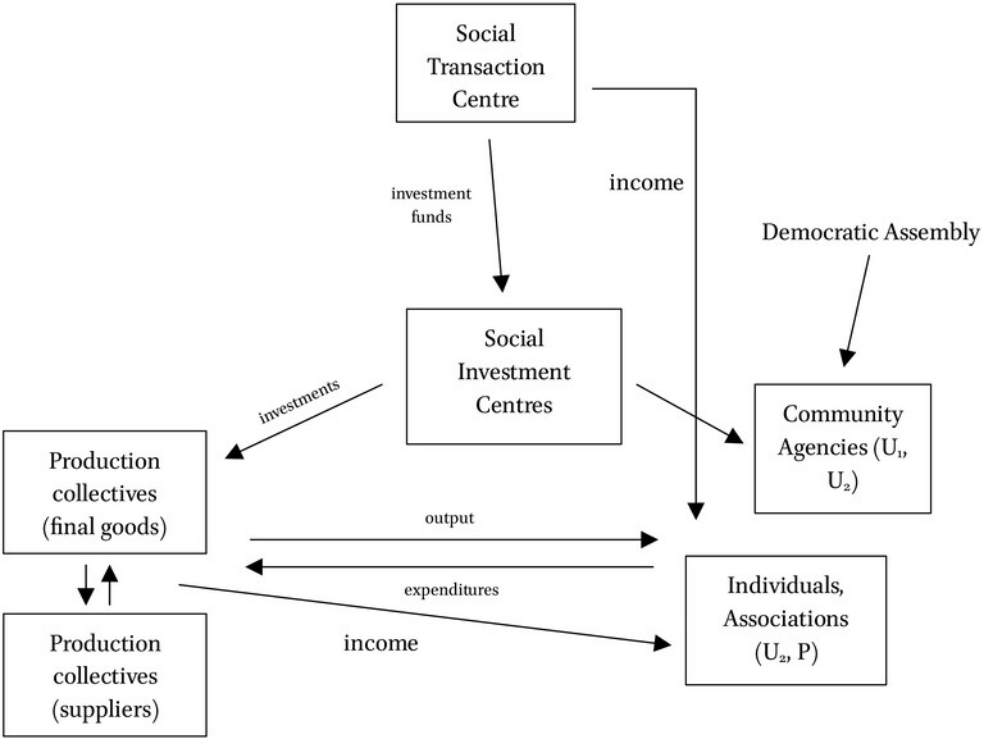


FIGURE 8 An overview of investment funding and income flows in production for social needs

As with the means of production acquired by one Collective from another, the international Social Transaction Centre is on both sides of the equation, so to speak. On the one hand, it allocates funds to Production Collectives to cover their costs, and the prices of final outputs are nothing but the cost prices of production. On the other hand, it allocates income to the members of Production Collectives and those engaged in other forms of socially necessary labour. It will be a high priority task of the national Social Transaction Centre to make and track allocations to approximate that equality of prices and income. Attaining a perfect balance, let alone maintaining it over time, is simply impossible. Fortunately, it is not necessary. A rough approximate balance of aggregate prices and aggregate income is achievable, and that is enough. The comparison is not with an imaginary perfection, but with the limitations and distortions in addressing particular needs when the property and production relations of capitalist market societies are in place.

From the standpoint of those using products to address their particular needs the key point to emphasise is that this model of republican socialism does not simply grant everyone a formal and abstract freedom to choose

the particular sort of life they wish to live. By granting everyone access to the material preconditions for living the sorts of lives they choose, it makes freedom actual and concrete. In the allocation of their income (or points, if you prefer) trade-offs have to be made. Do I prefer using income to acquire more products produced at lower costs, or fewer of those that cost more? As long as 'cost' incorporates a reasonable approximation of the full social costs of production, this is the sort of decision that should be decentralised and left to the person or persons directly affected.

Of course, a freedom consistent with a society whose ruling purpose is the full and free development of every individual, does not grant a licence to choose to live a life that can only be led when others are dominated and exploited. A solidarity society rules out the 'freedom' to accumulate a level of income enabling a luxury consumption of a few presupposing the domination and exploitation of many. But then a stop sign rules out the 'freedom' to impose excessive risks and harms on others, and abolishing slavery rules out the 'freedom' to own other human beings. Being prevented from imposing unreasonable burdens on others, while being allowed to do anything that does not impose such burdens, may be called a restriction of 'freedom' in one sense of that all too ambiguous term. But it is not a restriction from point of view of a solidarity society based on lessons learned in collective struggles against oppression.

If a particular item requires more income than the person is able to attain in a given period, they can choose to save some of their income for a later purchase. Also, nothing in the socialist model rules out gradual payment of purchases over time, so long as it does not generate an oppressive creditor/debtor relationship. That form of oppression is ruled out if payment over time does not involve an additional payment of interest.⁵⁵ The undermining of substantive freedom that so often occurs when borrowers are left in the hands of private creditors is ruled out. The historical tie between payment over time and oppressive debt relationships is cut.

From the point of view of units of production in the socialist model, when individual(s) use the income (points) they have been allocated to obtain a good or service, that confirms that the social trust bestowed on its producers in the allocation of social funding was warranted. The production unit had in effect

55 The absence of interest does not affect producers. In the proposed model producers receive funding to obtain needed inputs directly from Social Investment Centres. Whether they continue to receive funding in the future depends in good part on whether their own output has been acquired to address social needs. It does not depend on the specific social mechanism of acquisition.

promised to mobilise the collective creativity of its members to design, produce, and distribute a product that would address democratically determined social needs. The acquisition of its output is a sign that the promise has been fulfilled.

If income is not used to obtain its products, however, that does not necessarily mean the promise has been broken. It may mean that it has not yet been fulfilled. The members of the Collective now have an obligation to go back to the drawing board, so to speak, figure out what went wrong, and then mobilise their collective creativity again to either produce a better product or an entirely new one that might better address the needs of potential users.⁵⁶ Sector Agencies and Research Centres are there to offer production enterprises with data about what potential users want, information about available innovations, help in adopting best practices and innovations, and so on.

4 Conclusion

Section 1 of this chapter described the process of social investment on the local level in the model of republican socialism defended in this work. The process begins with assessments of Production Collectives' requests for funding by Sector Agencies (representing the perspective of other producers in a given sector) and Production Review Boards (representing other producers in the given locality). Production Collectives may revise requests in light of these assessments. Evaluations of final submissions are then provided to local Social Investment Centres. These Centres coordinate their allocations for the coming period, taking into account the democratically determined priorities among social needs and their judgements of Production Collectives' capacities to effectively address those needs successfully. The resulting set of allocations in effect establishes an indicative plan for social production in the coming period. Although the production of a range of specific products is part of the plan (a specific bridge, a community recreation centre, a particular household good, etc.), in general it is left to Collectives to decide how their commitment to produce for a range of social needs can best be carried out.

56 What happens to products that no one wishes to acquire at their cost prices? They could be offered at a price below the social and environmental costs of producing them, with the discount increasing every month for some period, after which they would be offered at no cost. If the accounting record showed that many people or organisations are willing to acquire them if costs are lowered, that is *prima facie* evidence that innovations lowering social costs of production ought to be sought.

There are good reasons not to assume that everyone has the time, interest, and background knowledge to make informed assessments and allocation decisions regarding every Production Collective's request for funding. It makes sense, then, to establish specialist institutions to accomplish these tasks. This grants members of Sector Agencies, Producer Review Boards, and Social Investment Centres forms of social power other members of the community lack. It is immensely important that those holding these positions have the requisite expertise. It is perhaps even more important that there is no tendency in the model for them to become a new ruling caste. When the members of Sector Agencies and Producer Review Boards are randomly selected from those nominated by their co-workers to serve limited terms, and the members of Social Investment Centres are randomly selected to serve limited terms from those who have successfully served in positions of responsibility in a broad range of socialist institutions of self-governance, both desiderata will tend to be met.

Section 2 examined issues arising in the production processes of the Production Collectives receiving funding. Emphasis was placed on how fulfilling their commitment to address social needs demands mobilising the collective creative intelligence of their members in all essential matters, including the distribution of the income within the Collectives, the choice of product lines, the means of production employed, the Collectives from which means of production are obtained, the social organisation of the production process, the innovations sought and implemented, and so on. In this manner alienation and coercion can be overcome in work relations to the greatest feasible extent within the 'realm of necessity'. Section 3 then turned to the process whereby the members of Community Agencies, individual social agents, and associations of individuals use their income to obtain the products they believe will best address the universal₁, universal₂, ('basic') and particular needs.

While there is no one best way to combine centralisation and decentralisation, planning and flexibility, universality and particularity, in order to further the full and free development of every individual, I believe the model sketched in this and the previous chapter accomplishes this task on the level of local production for local needs better than alternative proposals. Decisions involving the good of the local community as a whole and its individual members are made in structured processes designed to strengthen the tendency to further that complex multidimensional good. Local and tacit knowledge embodied in particular individuals, households, groups, and organisations are mobilised towards that end.

We are still very far from anything approaching a complete model of socialism. To this point we have only considered production by local producers for local needs, and socialism cannot be instituted on a merely local level. Neither

is socialism a mere aggregate of separate localities. Different localities in republican socialism must be connected in webs of democratic deliberations and decisions regarding flows of production and exchange and other matters of common concern. The next step in developing the model is to consider interactions within an extended region encompassing a number of local areas.

Before turning to that topic, however, there is an issue of immense importance that should not be deferred: the role of 'money' ('prices', 'income', and so on) in socialism.

The Role of ‘Money’ in Socialist Accounting

The plausibility and attractiveness of the model of socialism defended in this book depends on many factors. Can the social needs of the coming period be adequately articulated in the democratic process sketched in Chapter 5? Can the system of social investment outlined in Chapter 6 effectively allocate resources to units of production with the capabilities and motivation to address social needs effectively? Will units of production have the formal knowledge, informal know-how, and leadership to determine democratically the particular products to produce, the inputs used in the production process, the social organisation of the labour process, and so on, enabling them to address social needs effectively over time? Will the system of monitoring the performance of Production Collectives be adequate to the task? Will future social investments avoid the difficulties caused by the absence of hard budget constraints in so-called state socialism?

These questions (and many others) warrant extensive consideration. In the present chapter, however, I wish to focus on a different set of issues having to do with the role of money (or, better if more cumbersome, ‘money’) in the socialist model under consideration. Section 1 will raise some of the most pressing questions regarding this role. Section 2 reviews central features of money in capitalist market societies. These features are then compared and contrasted in Section 3 with the socialist alternative defended in this work, followed by a note contrasting this form of socialism with two recent models of market socialism. An overview of flows of investments, income, and expenditures in the model is presented in Section 4, along with concluding remarks.

1 Some Questions

Monetary terms (‘funds’, ‘costs’, ‘prices’, ‘income’, and so on) have been used regularly in the two previous chapters. I have described a process where units of account are created by a Social Transaction Centre by recording numbers in the accounts of Production Collectives, their members, and other social agents and organisations, corresponding to the allocations made by Social Investment Centres in the locality.

The pricing system in socialism is arbitrary in the sense that it is a social construction, an artifact. (It is, of course, arbitrary in capitalism and other forms

of market societies too, however much it may appear 'natural'.) In itself, it simply doesn't matter whether something is given a price of one unit, ten units, or a hundred units. What matters is that the system is uniform and proportionate. It must be uniform in the sense that the same system of units is applied throughout socialist society, on local, regional, national, and international levels. It must be proportionate in that every locality receives the same per capita share of funds. It needs to be proportionate in other ways as well. The units of account distributed to Production Collectives to acquire production goods must correspond to the prices of those goods, as determined by their costs of production as represented in the same units of account. The income allocated to Community Agencies to acquire social consumption goods addressing universal₁ needs and universal₂ needs provided as public goods must correspond to the prices of those goods, as determined by their costs of production. The income allocated to all social individuals as a social bequest representing the 'general intellect' as our common heritage must correspond to the prices of goods addressing universal₂ acquired as if they were particular needs, as determined by their costs of production. The income allocated to social individuals as a social acknowledgement of their social labour must correspond to the prices of the particular goods those individuals chose to acquire in the course of their particular life plan, as determined by their costs of production.

In the model of socialism being developed in this work, the international Social Transaction Centre has the technical task of creating units of account and tracking their use to maintain the requisite correspondences. While this is no doubt a complex and challenging task, it does not seem beyond the capabilities of specialists making use of advanced information technologies. The transparency of all transactions is one factor justifying this optimism. There are no tax havens in the model, no shadow banks. There is a social surplus in the model – more is produced than just means of subsistence consumed by producers and their dependents and replacement production goods – but it does not take the form of surplus value, a M' exceeding the M initially invested, that private appropriators can use for private ends in non-transparent ways.

The Social Transaction Centre (with its branches, discussed in Chapter 9) is on both sides of the equation, so to speak. It creates the units of account used on both sides of transactions, both those expressing costs of production and those representing funds used to acquire products at their costs of production. The members of the Social Transaction Centre have full access to all information regarding transactions involving these units of account. They have the background and internal motivation to get the numbers as correct as possible (if they didn't, they would most likely not be in the pool from which

members of Centres are selected). Formal oversight of their actions by Democratic Assemblies provides external motivation, as does the informal oversight of Production Collectives with a strong interest in obtaining funds for means of production and their own income, along with the Community Activist Groups, Community Associations, households, and other voluntary associations with a strong interest in acquiring goods for final consumption. The Social Transaction Centre that in effect creates 'money' by entering numbers into accounts, has the information, motivation, and capacity to maintain over time a rough balance between the aggregate costs of producing and acquiring needed goods. They may fail in practice, but if they do, they are able to make adjustments or explain must why they didn't to a Democratic Assembly (with power to remove the incompetent) or Jury (with power to rebuke intentional infringements of socialist principles).

At this point, however, these issues will be put to the side to raise questions about the status of a model making extensive use of money, scare quotes or no scare quotes. Is the model of socialism defended here ultimately just another variant of the familiar 'market society plus political regulation' framework found in both capitalist reformism ('social democracy') and market socialism? Has a true alternative to the 'dissociated sociality' of generalised commodity production and exchange been presented? If potential users of products determine the success of a unit of production's endeavours by their free choices to use means of exchange to acquire (or not acquire) – purchase (or not purchase) – that unit's products, isn't this clearly a market society of some sort, whatever terms might be used to disguise that fact? When all is said and done, aren't the preponderance of products produced as commodities here? Don't individual choices in the market ultimately decide which instances of private production count as social production and which do not? If private labour is socially validated as social in exchange, wouldn't commodities acquire the social property of 'value' in the Marxian understanding of the term? Aren't the funds used to accomplish that social validation a form of money? Wouldn't the concrete labour producing them simultaneously be abstract value-producing labour to some degree or other? If goods generally have value, a social property distinct from their physical composition, and if this value takes on a socially objective form in the shape of a special thing, money, then aren't we still in the world described at the beginning of *Capital* Vol. 1, where capital emerges as the dominant power in social life?

Perhaps all the rigamarole about assemblies, associations, and collectives simply obscures how our supposed socialist model does not escape capital's inescapability. Or perhaps it should be considered a model of market socialism rather than a sort of capitalism. If we accept the critique of market socialism

shared by Kornai and Pat Devine and many others, the difference does not matter that much. In their view, any attempt to combine the money and pricing of market systems with a level of social coordination incompatible with market forces is doomed to incoherence and failure, invariably mutating quickly into a capitalist market society or authoritarian central planning.¹ If the model of socialism presented here is a variant of market socialism and open to the same charge of incoherence and inevitable failure, it would be just as much a dead end for the socialist project as it would be if capitalism were taken to be unavoidable from the start.

2 A Note on Money in Capitalism

We can begin forming a response to these questions by reviewing some of the ABC's of money and pricing in capitalism. The place to start, as always with capitalism, is with the *dissociated sociality* of generalised commodity production and exchange. Products are generally produced as commodities for sale, rather than for immediate use by their producers. They are produced privately, in other words, without *ex ante* coordination among other units of production in the same sector or between producers and the ultimate users of their products. The private labour that has been devoted to their production may or may not have been socially wasted. It can only be validated as (indirect) social labour retroactively, through sale for money. When this takes place the products have a special social property, 'value', and the concrete (private) labour that produced potential use-values can be affirmed as simultaneously being abstract value-producing labour to some extent or other ('abstract' in that it produces the abstract property 'value', and the only socially objective measure of abstract (value-producing) labour time are the abstract monetary units from sale).

If the social validation does not occur, the product does not have value. When commodities are not sold, the privately undertaken (concrete) labour does not count as social (abstract) labour, however efficient the production process may have been in narrow technical terms. If the commodities are not sold, the privately undertaken (concrete) labour does not count as social (abstract) labour, even if there is a great social need for the products among those who cannot afford them. When there are sales, the value of the products

¹ Kornai draws the conclusion that a highly regulated form of capitalism is the only feasible alternative to what he terms the 'classic socialism' of bureaucratic command economies; Devine (like the author of the present work) holds out hope for a form of socialism distinct from both so-called state socialism and market socialism.

and the extent to which privately undertaken labour can be retrospectively affirmed to have been social labour are a function of the efficiency of the production process and the effective demand for the resulting products.² But neither productive efficiency nor demand explain why products take the form of commodities with value, or why money is a representation of social labour. The social relationships defining generalised commodity production and exchange explain these essential and historically specific determinations of capitalist market society.

Under these circumstances units of production *must* make monetary returns their dominant end, and social agents can generally gain access to the products they need only with monetary resources obtained directly or indirectly from association with profit-driven units of production. 'Capital' emerges from these social relationships as a macro-monetary totality, a unifying force over the social world, a higher-order ontological power, the power to impose the law of value on the social world it has emerged from.

I interpret the 'law of value' as a set of systematically interrelated tendency laws, including the tendency for products to take the form of commodities, the tendency for production to aim at monetary returns, and the tendency for monetary returns to realise valorisation, the transformation of M into M'. The commodification imperative, monetarisation imperative, and valorisation imperative are dominant organising forces of social life in capitalism. Together these imperatives reproduce and expand capital as a 'dominant subject' and 'self-moving substance', reproducing itself through the exploitation of that special sort of commodity, labour power, treated within its circuit as merely a form of capital ('variable capital').

Are these social forms, these tendencies, these imperatives implicit in the institutions and social practices described in this chapter and the last? We can consider the key components in turn.

3 Some Relevant Determinations of the Socialist Alternative

3.1 *The Absence of Dissociated Sociality*

In the socialist planning process, a community's general social needs (and a number of specific ones) and priorities among them are determined through a

2 As Marx insisted, if a product has no use-value (for those with disposable income), it has no value. As stressed in Chapter 2, the value of commodities in capitalist market societies does not result from production alone, and certainly not from circulation alone. It results from a dialectical unity in difference of production and circulation together.

process of democratic deliberation and decision-making combining elements of representational democracy (the Democratic Assembly, Community Associations, and Community Activist Groups) and direct participatory democracy (public forums, referendums). Production Collectives then engage in internal democratic deliberation and decision-making regarding the social needs they are most capable of addressing effectively. After social evaluations from those with special expertise in production processes (Sector Agencies, Producer Review Boards) and the environmental impacts of production (Research Centres) the allocation of social investment funds is decided by Social Investment Centres. It is then for the most part left to the Collectives receiving funding themselves to decide what specific products they will in fact produce over the course of the period and how those products will be produced.

The decentralisation of decisions about product development and production processes avoids some of the problems that beset centralised planning, where units of production are instructed (commanded) to produce specific goods with the use of specific inputs by a central authority. As a result, however, the general social commitments a Collective has made may not be actualised in the specific product lines it offers over the course of the production period. The model grants individuals, groups, and organisations in the community the freedom to decide that offered products do not in fact address their needs adequately. Perhaps the quality of what was offered was not acceptable. Perhaps too much of one thing was produced, too little of another. Perhaps new products are preferred. Perhaps needs have changed.

Does this show that the model of socialism presented here is based on privately undertaken production that must subsequently be validated as socially necessary through successful sale? If that were the case, products would have a special social property 'value' in Marx's sense of the term, measured by the money that provides the socially objective validation of privately undertaken production. Money would represent social labour that cannot appear directly as what it is (only private concrete labour can directly appear, not abstract value-producing labour), but must appear instead in the fetish form of things (commodities with value; money representing that value). And the model would have the same incoherence Kornai, Devine, and others discern in market socialism models, the same intrinsic instability that could only be resolved by moving to either an all-out market society or a command economy.

This diagnosis may appear plausible when we consider the use of funds for investment in means of production and the acquisition of means of consumption in abstraction from the other components of production for social needs. But as Aristotle noted, a hand considered abstractly in itself, apart from its rela-

tionship to the body, is not the same as a hand that is part of a living body. If we wish to comprehend a part of a living whole, we must consider its place in that whole. An exchange of income for a good means one thing when it is part of a system of generalised commodity production and exchange whose ultimate purpose is valorisation. It means something quite different when it is part of a system aiming at the 'full and free development of every individual'.

In the model of republican socialism presented here, the sociality of labour is expressed from the start and throughout the production and distribution process. There is a level of *ex ante* coordination of social investment and social production far beyond what any variant of market society could incorporate at its core. The more thorough the democratic determination of social needs by Community Activist Groups, Community Associations, Democratic Associations, and within Public Forums, the more carefully considered the requests of Producer Collectives for social investment, the more accurate the evaluations of the capabilities of producers by Sector Agencies and Producer Review Boards, the more practical reason shown in the judgements of Social Investment Centres, the more effective the *ex ante* social coordination.

However, when Producer Collectives are free to decide for themselves what specific product lines to offer, and individual, groups, and organisation in the community are free to decide which products on offer best address their needs, the *ex ante* coordination of production and needs and the relationship between them *ex post* may not perfectly coincide. Perhaps some moment or moments of the process of *ex ante* coordination did not work perfectly, whether due to a random occurrence that could not be helped or some recurrent shortcoming that could be improved. Or perhaps it is just due to the fact that when human freedom, the open-endedness of human needs, and the creative innovative capacities of human beings are involved, the results are never perfectly predictable. Neither factor implies that labour has been privately undertaken, as in market societies. The point is simply that not all undertakings of social labour are successful. The hunting and gathering labour of tribes remains social labour from start to finish, even when prey eludes hunters and gatherers fail to find edible plants. A research group does not cease contributing to scientific and technological understanding when an experiment fails or when a prototype does not work. Similarly, products produced within a system designed to mobilise production for social needs are produced by social labour, even when the social intention is not met in a particular case.³

3 What if an enterprise acquires an input from another Collective, or an item for social or individual consumption is acquired by a Community Agency or social individual, when the

Social deliberation and decisions in the course of production cannot eliminate all uncertainty. But then the elimination of uncertainty by either perfect and comprehensive central planning or an invisible hand generating a general equilibrium is an utter fantasy. Ineliminable uncertainty does not make social production private production. There is an immense difference between direct social labour being confirmed (or not) as successful in a particular instance, on the one hand, and generalised private labour requiring retroactive external confirmation that it was indirectly social to some degree, on the other.

3.2 *The Absence of the Commodification Imperative*

To put the point as simply as possible: while many goods and services in the model are acquired by expenditures of investment funds and income, the commodification imperative defining capitalism has no place in republican socialism for a number of reasons.

* There is no inherent and dominant tendency to minimise the goods distributed as free goods.

Every community democratically decides for itself the percentage of its investment funds to be devoted to producing free public goods addressing the general social consumption needs of the community (infrastructure, the institutions of socialist self-governance, and so on) and the basic universal₂ needs of social individuals. There is a long (relative to even the most progressive capitalist society) list of universal₂ goods that must be provided as free public goods. Any local community is free to decide to expand the list beyond what is required on other (regional, national, and international) levels. As we shall see in Chapter 11, the scope of knowledge goods produced within commons-based peer production and distributed freely to anyone who wishes to use them is also freed from the arbitrary constraints that limit open-source production in capitalism.

The production of free public goods is not completely unconstrained. The two solidarity constraints must be respected. Also, 'free and full development'

acquirer would have preferred a different product that was not available? In one sense the social labour producing that product was successful, in another sense it wasn't. Since all acquisitions are made over electronic platforms, it would be easy enough for the acquirer to note this during the process of acquisition and for the producing Collective to be informed that this was the case. If this happened on a large enough scale, the Collective would be expected to take steps to improve product offerings. The relevant Sector Agency and Social Investment Centre, having access to this information as well, would then monitor whether effective improvements were made, with the latter taking the results into account in future funding decisions.

has been taken to imply that producers and consumers have considerable freedom to use their investment funds and income to acquire products that are neither universal goods freely distributed by public agencies nor free knowledge goods provided by commons-based peer production. The commodification imperative, however, does not hold simply because some important categories of goods are acquired through such expenditures. The commodity form is a dominant social form when goods *must* generally take the form of commodities for sale at profit. That is not the case in the model.

* In capitalism, enterprises are themselves generally a special type of commodity, purchased through acquiring shares. In socialism, workplaces are categorised properly in terms of social 'ownership' or, better, as part of the social commons.⁴ They cannot be acquired by *any* amount of income. They are not commodified or commodifiable.

* What is true of workplaces is true of their component parts. In capitalism means of production, fixed and circulating, are privately owned as commodities. In socialism, in contrast, they have the social form of the commons, rather than the commodity form. While members of a Collective share use-rights of means of production when they receive social investments, the formal 'ownership' of those means is retained by the community, the source of the investment funds used by the Collective to acquire them.

* Most importantly of all, labour power is a commodity in capitalism, purchased as if it were a thing that could be privately owned for the duration specified in the labour contract, used as an instrumental means to others' (and to capital's) end. In socialism, to contribute living labour to a Worker Collective is to be a member of a particular community embedded within larger communities, pursuing ends one has legislated for oneself through workplace democracy and civic self-governance.

3.3 *The Absence of Value*

'Value' in Marx's sense of the term, the sense relevant to distinguishing capitalism from other modes of production, is a property of products of exchange

4 This differs sharply from John Roemer's model of socialism, where enterprises are privately owned, but the monetary resources required to purchase them are distributed to all individuals on an egalitarian basis upon reaching adulthood (Roemer 1994, 1996).

when they are generally produced as commodities by private labour that must be retroactively validated as social labour through sale for money. If the commodification imperative is put out of play, if production is social production from the start, if the 'factors' crucially responsible for commodity production being *generalised* commodity production (investment funds, production facilities, means of production, labour power) are *not* in the commodity form, then 'value' cannot be a defining social form.

'Value' is a property of products only when commodity production and exchange is generalised. Products in socialist production are not defined by their 'values' in the Marxian sense of the term relevant to market societies. They are primarily defined by their use-values to individuals, associations, and communities, and by the social forms of self-governance in workplaces and communities.

3.4 *The Absence of a Monetary Imperative*

We turn next to the funds allocated to Production Collectives. A portion is used by units of production to acquire inputs produced by other units. A portion is income used by members of a Collective to acquire goods for themselves, their households, or some other form of group consumption. Yet other funds are distributed to Community Agencies for social consumption, and to individuals and associations outside of Production Collectives for personal consumption. A key function of money is clearly in play here: these funds operate as a *means of exchange*. Does it follow that we should speak of socialism as making use of 'money' here in the same way money is used in capitalist market societies and models of market socialism?

The same term is used in the two cases, even if in one use scare quotes have been employed (or taken as implied). That does not mean the same social form is being referred to.

The first important consideration is that the commodity form is not generalised in this model of socialism. Social labour does not appear in the alien form of a property of things (the value of commodities) expressed in other things (units of money). There is no imperative to expand the scope of things with a price. And the units tracking exchange in the model do not have a property essential to money in market societies, the property of universal exchangeability; *the unit of exchange is not a general equivalent*.

In terms of the social relations defining capitalism, the crucial case is labour power. Capitalist money confronts the owner of labour power as an alien power before which they must submit, a thing granting its possessor social power over both the life activity of others and the products resulting from the mobilisation of their life activity. The means of exchange in socialism do not grant such social

power to those possessing it. They grant only the far more limited power to confirm whether the social processes directly designed to address social needs have successfully accomplished that goal in a specific case. If they have, no money holder now has greater social power over the living labour of others. When they haven't, no holder of money has less of that perverse social power than they had before. What the accounting transactions do provide is information relevant to making the *ex ante* social coordination of production for social needs more successful. 'Money' here, in brief, is primarily a unit of account, designed to provide feedback and future guidance to Production Collectives and Social Investment Centres.⁵

'Money' flows also provide relevant information to Community Associations, Production Review Boards, Democratic Assemblies, Sectoral Agencies, Research Centres, and the public at large regarding the performances of Production Collectives, Social Investment Centres, the innovation system, and so on. But these flows do not tend to systematically monopolise the attention of decision-makers, pushing other forms of relevant information aside, as they necessarily tend to do in capitalism and market socialism.⁶ These are not flows of capitalist money. Money here is nothing more than accounting numbers tracking allocations and exchanges.

As long as there is a sphere of necessity including a sphere of production where goods are produced within formal organisations, there must be some process whereby particular formal organisations are granted (or denied) permission to operate. In socialism, where there is no class of slave owners, landed aristocrats, bureaucratic elites, or private holders of investment capital with the social power to grant or deny permission, the granting of permission is socialised through negotiations within and among Community Activist Groups, Community Associations, Democratic Assemblies, Production Collectives, various other socialist institutions and organisations, and the public at large, culminating with the allocations of social funds by Social Investment Centres. Permission to undertake production is explicitly social permission, based on explicitly social criteria determined through collective democratic process and subject to oversight by the community as a whole and its represent-

5 There is, for example, a *prima facie* case to increase the production of goods that are quickly sold at their cost price. There is a *prima facie* case to decrease the production of goods that are not quickly sold at their cost price. There is a *prima facie* case to cease producing goods that are not ever sold at their cost price.

6 Examples of other information that needs to be taken into account are given in Chapter 7, Section 4 below.

atives. 'Money' does not play a determining role. It does not grant its holders this social power. It does not define the end that social power is directed to. Under these circumstances 'money' – if we wish to keep using that term – really is what so many capitalist apologists have mistakenly said it is in capitalism, a means to further human ends.

In contemporary capitalist societies, money is created by Central Banks and by private financial institutions in the banking and shadow banking systems whenever they grant credit and thereby simultaneously expand the asset and liability sides of balance sheets. The coercive powers of the state come into play insofar as the state defines and enforces rights to create monetary units in the national currency to private entities (banks and near banks) and quasi-public/quasi-private entities (like the Federal Reserve Board). In the socialist model here, the accounting units are created by a Social Transaction Centre by recording numbers in the accounts of Production Collectives, their members, other social agents, Community Agencies, and so on. These units of account, then, are like capitalist money in that they are created out of nothing by writing a number down in an accounting ledger. However, they lack essential properties of capitalist money. They do not measure value, they do not have generalised exchangeability, they do not allow the private appropriation of society's productive resources, they do not grant social power over living labour to its holders. No less importantly, they have an essential property that capitalist money lacks, the property of belonging to a system of social production for social needs.

3.5 *The Absence of Production Processes That Are Valorisation Processes*

The most profound difference between the accounting units of socialism and capitalist money stems from the fact that *there is no valorisation imperative in republican socialism*. Units of production in the former are not profit-driven, and individuals do not generally depend on association with profit-driven enterprises for access to goods addressing their social needs. Not only is the accumulation of delta M (surplus value, the difference between M' and M) not the dominant social end; there is no delta M. The 'ruling purpose' is instead 'the full and free development of every individual', not capital accumulation. This crucial difference is manifested in production in a great variety of ways:

- * The allocations Worker Collectives receive when their requests for investment are approved are grants, not bank loans or debts incurred from the sale of bonds, and not equity purchased by investors.

The Collectives are not forced by the claims of external investors to accumulate monetary returns in order to repay a loan or bond with interest, provide dividends to shareholders, or do whatever they can to aid the appropriation of capital gains from equity holdings.

* Collectives are not forced to accumulate a monetary surplus in order to possess sufficient funds to cover any future increases in the cost of obtaining necessary inputs, or to expand production in the hope of expanding market share, or to maintain their share of a growing market, or to undertake innovations promising to generate competitive advantages.

Whether a Production Collective has funds to stay in operation, expand, or innovate depends entirely on the social investment process, and not on retained earnings, loans, or equity provided by private investors. The members of Social Investment Centres provide funding when doing so promises to further production for social needs more effectively than alternative allocations. Ample social oversight verifies whether that objective was accomplished, and whether subsequent social investment and production has responded appropriately to the answer.

Given these significant differences, socialist accounting has a different logic than capitalist accounting. It is not concerned with the balance of assets and liabilities in public or private banks, other sorts of private enterprises, households or other sort of association. A series of socialist accounting transactions begins when the Social Transaction Centre records a number in the account of a Social Investment Centre representing its share of the local community's share of social funding. When the Investment Centre decides to fund a Production Collective it informs the Transaction Centre that the number in its account by the amount of investment and the account of the Collective is to be increased by the same amount. The Collective then informs the Transaction Centre to decrease its account by the aggregate amount of social funds allocated for the income of its members, while adding to the account of each member the person's share as determined by the system of distribution affirmed by members in a referendum after democratic deliberation. The Collective then uses its remaining funds to acquire the means of production it requires from other Production Collectives. When a decision to acquire is made it informs the Social Transaction Centre to deduct the cost of acquisition from its account and increase the account of the Collective from which the input is acquired by that amount. When, finally, members of the Collective use the income they have received to acquire consumption goods from a Production Collective, the Social Transaction Centre is instructed to reduce their accounts by the costs of the

products and increase the account of the Collectives the consumer goods are is acquired from by the same amount.

There is no point in the flow of funds from Social Transaction Centre to Social Investment Centres to Production Collectives to expenditures to acquire production or consumption goods where the units of account operate as money capital in a valorisation process. The funds that in a metaphorical sense flow back to Production Collectives in the acquisition process are not privately owned by private external investors with ownership claims or by anyone else. The members of the enterprise have rights to use the production apparatus and spend the income they receive to address their particular needs, but they have no rights to appropriate the Collective's earnings.

If we wish, we can think of a production enterprise receiving investment funds as being in 'debt'. But this is a debt to society, not private investors, and the units of account in a Production Collective's account representing expenditures to acquire its output are not used to pay back the enterprise's debt. It is 'paid off' with the members' social labour, their activities of producing for social needs, and not through repayment of money. The units of account in a Production Collective's account representing the expenditures that acquired its output are not accumulated for reinvestment, or distributed to shareholders, or distributed as additional income to members. They are simply one source of information regarding the success of the *ex ante* coordination of production and social needs through indicative planning, nothing more and nothing less. After they have served this purpose they play no further role in social life. They are wiped out by the Social Transaction Centre, returning to the nothingness from whence they came.

3.6 *The Absence of Retained Earnings*

One of the most striking features of this model of socialism is the way the return flow of funds to Worker Collectives does not function as a 'store of value' for enterprises, unlike momentary returns in capitalism. Funds cannot be accumulated by Collectives over time. This key feature of the model has already been discussed at length in Chapter 5, Section 5. It is, however, important and controversial enough to consider again.

When a particular enterprise is allowed to accumulate retained earnings over time, there is a powerful structural tendency for its members to tend to pursue the particular self-interest of the Collective and themselves to an excessive degree – which in this context means to a degree incompatible with the full and free development of every individual. The dissociated sociality that was supposed to be dissolved by the democratic determination of needs, the social evaluations of Production Collectives' requests for funding, the allocations of

Social Investment Centres, and so on, reemerges in the form of competition for monetary returns among Collectives. The valorisation imperative would return as well, as competitive pressures lead Collectives to prioritise the increase of retained earnings over other ends.

If retained earnings were allowed, it would seem 'natural' that particular enterprises be allowed to reinvest a portion of them. The more retained earnings are the source of investment funds, the less need Collectives would have to request investment funds from Social Investment Centres. The most successful would have no need. The more particular enterprises invest out of retained earnings, the more the direction of investment flows are determined by the private good of the enterprises as perceived by their members, rather than the democratically determined priorities of social needs. None of that would matter if the invisible hand of market ensured that the pursuit of particular self-interest automatically furthered the universal good of the community as a whole. But a myth ensures nothing, and the invisible hand is a myth.

Further, if retained earnings were allowed, it would seem 'natural' that particular enterprises be allowed to distribute a portion of them to members as additional income. If retained earnings could be distributed among members, some surely would be. The more this happened, the more future production would be directed to the growing atomised effective demand – and the less the needs addressed by production would match democratically determined priorities of social needs.

Another issue stems from the fact that the success of a given unit of production has more to do with the general social context – including the 'general intellect' manifested in the collective formal and informal knowledge and know-how bequeathed from the past, the education system enabling us to appropriate and build upon that shared legacy, the effectiveness of the process of defining social needs, the process of allocating social investment funds, the inventiveness of common-based peer production and regional, national and international innovation systems, and so on – than it does with the accomplishments of any particular enterprise. Why should the members of that enterprise appropriate most of the benefits of what is a collective social process from beginning to end?

It is easy enough to assert that a public authority could simply tax the retained earnings of units of production and redistribute the results to maintain fairness. But this brings with it another point of potential conflict, the tension between particular enterprises and the public authority that taxes and redistributes their returns. History provides good reasons to think that when such conflict becomes entrenched solidarity in the society will be weakened over time.

If there is a feature of a model of socialism that has a strong tendency to generate outcomes that over time erode the model, the model is flawed. When retained earnings are reinvested to further the particular interests of particular Collectives or distributed as income to further the interests of particular Collectives' members, the tension between particularity and universality is systematic. It is almost always far better to avoid a systematic problem than to try to address it after it has arisen. If enabling enterprises to retain earnings tends to lead to concentrations of economic power threatening to undermine key elements of republican socialism, it is better to eliminate retained earnings rather than assume that taxes and redistribution will be sufficient to eliminate the threat indefinitely. There are no taxes for redistribution in the model of republican socialism defended here because none are needed for the (hopeless) task of correcting dominant tendencies to excessive particularity after the fact.

In the model of socialism being presented, the particularity of particular Collectives is not subjugated under an abstract universal imperative like the valorisation imperative. No less importantly, the expression of particularity by Collectives and their members does not undermine the solidarity uniting the society into a dynamic whole. In this model the intelligence and creativity of the members of particular collectives are mobilised to address a particular subset of social needs, while solidarity is fostered as all investment is socialised investment. Any tension between particularity and the universal social good of the community is accidental or enhancing, rather than systematic and destructive.⁷

3.7 *A Note on Two Models of Socialism with Retained Earnings*

David Schweickart's model of Economic Democracy can be seen as an attempt to balance particularity and universality in the investment process by distinguishing a Collective's responsibility to maintain the value of past social investment from the allocation of new investment funds. In his model, production units are initially formed by the social investment of new funds by community banks. These banks must adhere to two principles in their allocations. The new Collectives must, first, be foreseen as profitable, which Schweickart takes as a proxy for addressing social needs. (Other features of the model are designed

7 An example of an enhancing tension is found when a particular Collective introduces a new product that meets social needs in a new and better manner, while the society at the given point in time has not yet generally recognised the superiority of the new offering.

to keep inequalities of income within relatively narrow bounds. He argues that with effective demand widely dispersed throughout the economy, profits will not reflect the distortions of market societies where effective demand is concentrated in relatively small groups.) Allocations must, second, create employment. Once formed, the means of production of the unit of production, having been acquired through a community's share of social investment funds, are categorised as social property rather than the private property of either a private investor or the members of the Collective. Members of the Collective are under an obligation to preserve the community's investment over time, and therefore cannot distribute all of retained earnings as income for themselves. Since use of physical means of production either uses them up in a given production period or over a series of periods, and since innovation can make some means of production useless before they are used up, what must be preserved over time are not the means of production themselves, but their monetary value. It is left to particular units of production to decide how best to do allocate a portion of their retained monetary earnings (profits) for investments to replace means of production replacing the value of those used up in the production process to that point. After all expenditures have been made the remainder of the retained earnings are distributed to members of the Collective, the 'residual claimant'. (At this point we could ask whether maintaining this value (along with obeying the law and complying with any regulations of enterprise activity imposed by legitimate authorities) is all society should ask in return for the initial social investment.) All investments going beyond replacement investments (that is, new investments to expand an existing unit of production or create a new enterprise) are explicitly social investments undertaken by community banks, funded by a flat tax on the 'capital assets' of existing producers.⁸

The moment of particularity in this arrangement (to speak in Hegelian jargon) is manifested in the choice of particular enterprises regarding how best to maintain the value of their given assets, using their own retained earnings. The moment of universality is manifested in the imperative to maintain the value of the community's investment, the social funding of new investment, and the explicitly social criteria used to select the new investments receiving funding. At first glance this seems to be an appropriate balance of universality and particularity. Our closer inspection, however, the moment of particularity claims more weight than it should.

8 Schweickart 2011, pp. 51–8.

For one thing, in a socialist order where community instability is avoided and Production Collectives are strongly supported, we can expect over time that the creation of new units of production will tend to occur at a slower rate than established ones are shut down. This implies that over time a smaller proportion of investment will be socialised through community banks, and greater proportion left to decisions regarding the allocation of retained earnings by particular production enterprises. This tendency is greatly reinforced over time as new investments expand existing enterprises. With every expansion the value of the means of production that particular enterprises must maintain out of their retained earnings increases. Taking both points into account implies that in Schweickart's proposal the proportion of total investment in the economy allocated by particular enterprises will tend to increase over time, while the proportion allocated by community banks representing the universal interest of the community as a whole declines.

A possible counter-tendency in Schweickart's model might be sought in the way the rate of new investment undertaken by community banks could be increased at any time, being determined democratically. But that would only avoid the problem in the short-run; the greater the proportion of new investment at some T_1 , the more the investment decisions made by particular enterprises out of retained earnings at a later T_2 ; in other words, the more weight in the model falls on the moment of particularity.

The model of Economic Democracy proposed by Schweickart is in part intended, I think, to be an alternative to forms of market socialism where almost all investments are left to particular enterprises and social investments are limited to a narrow range. But over time Schweickart's model would become less and less of an alternative, as the relative weight of social investment tended to shrink relative to private investment.

Some of these same issues can be raised regarding Joseph Caren's version of market socialism, later endorsed by G.A. Cohen. Caren's project is to construct a model of socialism combining the freedom and efficiency he takes to be inherent in generalised commodity production and exchange with equality in the distribution of income. He assumes that liberty, efficiency, and equality can be attained simultaneously when socialistic moral incentives replace the material incentives of capitalism. The fundamental moral obligation is for everyone to 'contribute to society what he is able to contribute'.⁹ In a society where this socialist morality has been internalised (and reinforced by formal and informal enforcement of social norms), the principle 'from each according

9 Caren 1981, p. 100.

to his abilities' would have material actuality. On the assumption that market rewards accurately measure the relative scarcity of different contributions, this would in effect mean that social agents were motivated to earn the most they can. And it would mean that these agents would support the system of taxation and redistribution required to bring about a post-tax equality of income. Carens writes, 'One way to interpret this principle ["from each according to his abilities ..."] would be to say that, in a society where incomes are distributed equally, people have a duty to make good use of their talents and skills to contribute to the productive output of society ... It would be possible to redistribute income equally because people would be able to count on others doing their fair share of the work'.¹⁰ They would, in fact, 'believe that they have a social duty to earn as much pre-tax net income as they are capable of earning' even when any income received exceeding an equal distribution would be effectively taxed at 100 percent and redistributed.¹¹ The result, Carens concludes, would be a socialism that synthesised the liberty and efficiency of a well-functioning market society with the equality socialists demand, without requiring massive sacrifices for others. No self-sacrifice is required, Carens asserts, when the self has internalised socialist morality.

The liberty and efficiency of generalised commodity production and exchange, and the defining of socialism as egalitarian distribution must both be questioned (and rejected). The point to note here, however, is the profound tension between continually striving to obtain 'as much pre-tax net income as [we] are capable of earning' and supporting the levels of taxation and redistribution required for an equal (re)distribution of income. The two drives are not logically incompatible. But there is a practical incoherence; the stronger the former, the weaker the latter will tend to become over time. The more the market appears to grant agents what they have 'earned' (and the more that appearance is reinforced by the ideological claim that market returns reward agents' productive contributions), the less they will tend to conceptualise their earnings as collective resources.

Models of socialism like Carens's exhibit the same schizophrenia as the 'merely political emancipation' Marx assesses in 'On the Jewish Question', where the intense particularism of economic agents in market society is combined with a supposedly pure universalism of political citizens.¹² Contemporary 'effective altruism' exhibits the same defect. Carens's position is a paradigmatic instance of a proposal that is 'utopian in the bad sense'.

10 Carnes 1987, pp. 683–4.

11 Carnes 1981, p. 25.

12 Marx 1975a.

4 Conclusion

Section 1 of this chapter raised questions regarding the role of money in the model of socialism presented in this book. The following sections argued that 'money' in this model lacks the central features of money in capitalist market societies reviewed in Section 2. There are 'flows' of funds in the model, so to speak. But as explained in Section 3, they are not essentially connected to sociality in the perverse form of dissociated society rooted in the generalisation of commodity production and exchange, nor to value, a supersensuous social property of things, nor to a valorisation process where particular units of production seek to retain monetary returns.

In socialism, social funds are created out of nothing by the Social Transaction Centre, and they in effect return to nothingness after fulfilling their social purposes. One social purpose is to mobilise the productive powers of social labour for social ends. Another is to provide a way for social agents, households, and organisations to mobilise their self-understanding of their needs and the goods most likely to address them effectively. A third is to provide relevant information about the relative success of past processes of production for social needs.

Figure 9 illustrates the way accounting units move from one account to another in the model of socialism presented in this work.

The first three rows concern the relationships between Production Collectives producing production goods that producers of final products use as inputs.¹³ In row 1, for example, PCS_{ul} refers to suppliers of inputs for producers of universal₁ goods.¹⁴ Moving to the right, the second term in the row (MIS_{ul}) refers to the income the Social Transaction Centre provides to the members of these suppliers. The Social Transaction Centre also places into these Collectives' accounts an amount (ICS_{ul}) estimated to meet the costs of the inputs they themselves must acquire from other Collectives. (This is a social measure of both the direct and indirect labour hours required to produce those inputs and their associated environmental footprint.) The next entry in the row stands for

13 Figure 9 does not depict all flows of funds in the model. It ignores, for example, units of production producing goods addressing more than one general category of social need and funding of the Research Centres considered in later chapters. Incorporating omitted aspects of the model would go far beyond what can be easily depicted in a single figure. Including them would not change any of the claims about socialist 'money' defended in this book.

14 Here as elsewhere in this work, 'goods' is often used in a broad sense encompassing services.

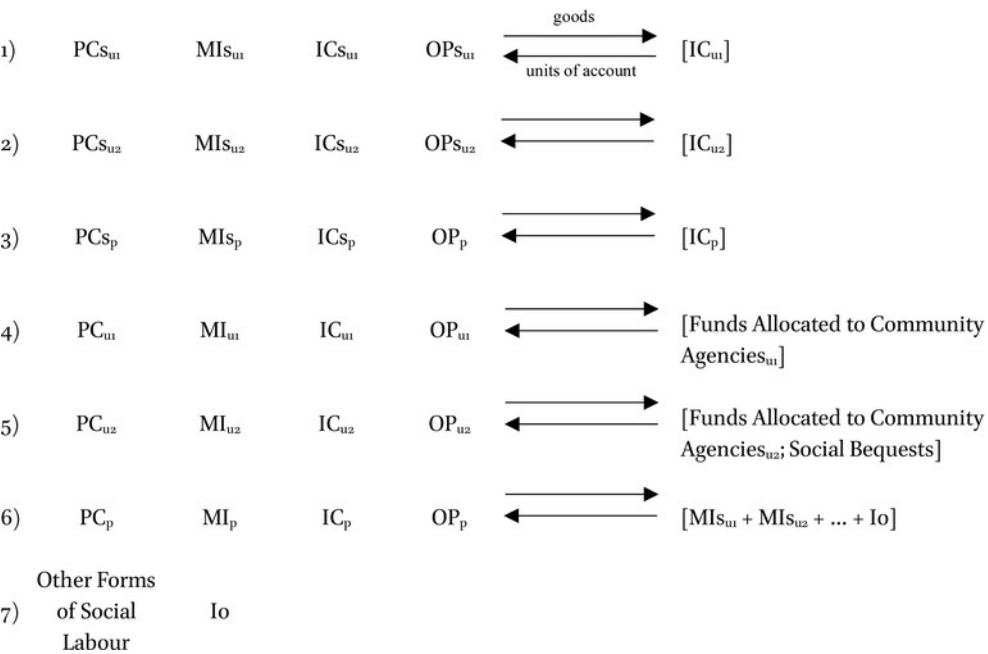


FIGURE 9 Flows of ‘money’ in republican socialism
‘PC’: Production Collectives; ‘s’: supplier of inputs; ‘MI’: Members’ Income; ‘T’: Income from other sources than membership in Production Collectives; ‘IC’: input costs; ‘OP’: output prices

the output prices of PC_{su1} (OP_{su1} , representing the direct and indirect labour hours required to produce these outputs and their associated environmental footprint).

If we turn to fourth row, PC_{u1} refers to Production Collectives producing goods and services addressing universal₁ social needs. The third entry signifies that the Social Transaction Centre has entered a figure in the accounts of these Collectives intended to cover their input costs (IC_{u1}). This amount results from the estimates of OP_{su1} resulting from a social process incorporating the explicit and tacit knowledge of social agents in Production Collectives, Sector Agencies, Research Centres, and Social Investment Centres. Insofar as that process outlined in the previous chapter (or modified in some manner consistent with the socialist project) produces a reasonable result, it is reasonable to expect that the producers of final goods and services addressing universal₁ needs will have the social funds required to acquire the inputs they require to produce those final goods, as depicted in the arrows between the last two terms in row 1.

The relationships between producers of inputs for Collectives producing final goods addressing universal₂ needs (PC_{su2} , row 2) and the Collectives using those inputs (PC_{u2} , row 5) are analogous, as are those between suppliers of

inputs for Collectives producing final goods addressing particular needs (PCs_p) and the Collectives using those inputs (PCp), as depicted in rows 3 and 6, respectively.

The brackets in the first three rows of the final column are meant to convey that the relevant figures are accounted for elsewhere in the figure, more specifically, in the column signifying the entries made by the Social Transaction Centre in the accounts of the different categories of Production Collectives to cover their input costs (IC). The last entry in row 4 affirms that goods addressing universal₁ needs (produced by PCu_1 Collectives) are acquired by Community Agencies making use of funds (a quantity of units of account) placed in their accounts by the Social Transaction Centre for this purpose.¹⁵ Here too the amount allocated to them is determined in a social process designed to generate a reasonable estimation of the prices of the goods in question (that is, the social costs of their production).

The relationships depicted in row 5 are parallel to row 4, with the complication that the outputs of Production Collectives producing goods to address universal₂ needs (PCu_2) are in part acquired by a second sort of Community Agency charged with overseeing their free distribution, and in part acquired by individuals making use of the social bequests all individual receive as a collective dividend from our collective heritage (discussed in the previous chapter). Here too the acquisition of goods is recorded in a series of accounting transactions, with the amounts deducted from the accounts of the organisations and individuals acquiring universal₂ goods added to the accounts of the producers of those goods. Here too the amounts provided for acquisition reflect a reasonable social estimation of the costs of acquiring them.

In row 6, OPp represents the output prices of the Production Collectives (PCp) that produce particular goods addressing particular needs. The sources of funds used to acquire these outputs are the accounting units ('money', 'points', whatever) added to the accounts of members of Production Collectives by the Social Transaction Centre ($MIS_{u1} + MIS_{u2} + \dots + MIP$), along with the units placed in the accounts of social individuals as social acknowledgement of social labour undertaken outside Production Collectives (Io).¹⁶ The amounts placed in individuals' accounts by the Social Transaction Centre are functions

15 A Community Agency, for example, established and overseen by a Democratic Assembly to ensure transportation needs in the community are met, could then transfer a portion of its allocated funds to Production Collectives able to build a bridge needed in the community at its social cost of production.

16 Examples include income from membership in other sorts of Worker Collectives such as Democratic Assemblies or Research Centres, socially necessary labour outside formal Collectives (e.g. care labour in households for the young, elderly, or infirm), grants for con-

of the average worker's income, set on the basis of a social process designed to generate reasonable anticipations of the prices of particular goods (determined by the social costs of producing them), OPp. The last entry in row 6 is in brackets, since the amounts to be summed are accounted for elsewhere in the figure.

The absence of an equal sign between the final two entries in rows one through six should be noted. Reasonable estimates can be mistaken for a host of contingent reasons; changes in production processes and available products can change what must be estimated. *The aggregate prices of the different categories of outputs do not have to be precisely equal to the corresponding aggregates of funds for acquiring them for this system of socialist accounting to be feasible.* Given the superiority of republican socialism over the alternatives in so many dimensions, it is enough if generally – proximately and for the most part, as Aristotle would say – the aggregates represented by the fourth and fifth entry in these rows correspond closely enough for the system to be feasible.

The Social Transaction Centre creates units of account on both sides of the ledger, so to speak. The social processes resulting in indicative plans provide the information required for the Centre to enable an initial rough correspondence between prices of products and acquisition funds. Both it and Social Investment Centres are able to track expenditures of these units during the period (the relevant quantities are part of the public record even when other information is anonymised). Competent specialists making use of advanced information technologies should have few difficulties suggesting adjustments to maintain a rough balance of prices and funds in the accounts of social organisations and individual agents. The 'ruling purpose' of socialist accounting is the ruling purpose of socialism. When the balance is maintained, social individuals engage in activities and have access to goods and services contributing to their full and free development.

On the micro level, relationships involving expenditures of accounting units will be variable. Production Collectives with lower environmental costs and lower concrete labour times, and therefore lower unit prices in our model, will tend to attract inflows of accounting units from those wishing to acquire their output. Those with higher unit prices will tend to have greater difficulties. Both cases provide useful information about the process of production for social needs.

tributions to commons-based peer production of high priority (discussed in Chapter 11), stipends received during periods of education and training, and temporary membership in ad hoc Collectives.

If products are not acquired at a price representing unit costs, it may be a sign that specific investments in production have to be adjusted because of innovations in production processes, the introduction of superior products, or a revaluation of social or individual priorities. This would mean that the given unit of production is not as effective at producing goods to meet social needs as it must be to warrant the share of the community's resources and environmental footprint that has been devoted to it. A Production Collective should be afforded a reasonable opportunity to learn what it could be doing better with the aid of the relevant Sector Agency and Research Centres and implement what it has learned. The producing Collective, for example, may be spurred to redesign the product to make it more useful, or replace it with an entirely different product line. But it might instead be appropriate to simply wait for word of mouth about its qualities to spread. Or it could be that a Collective that regularly innovates has higher unit costs than one producing standardised products with few substitutes. From a social standpoint, that would not in itself necessarily make the former less valuable.

On the other hand, it might be that the goods produced are of such poor quality that members of the community do not wish to devote their income to acquiring them. Or they may have been produced inefficiently relative to what could have been reasonably expected. Again, Collectives that have not produced goods effectively addressing social needs should have ample opportunity and support to make changes. However, there must be a sense of urgency. If performance is still inadequate after a reasonable period of time, a general social recognition that further social funding would not be justified will necessarily tend to arise. A socialism for the twenty-first century must take on board a crucial lesson of twentieth-century 'state socialism': soft budget constraints fatally undermine the extent to which production serves social needs.

The crucially important point is that in socialism, no quantitative measure does away with the need to deliberate about qualitative matters. This holds at the start of the process of producing for social needs: the most important relative costs of different forms of production are best taken into account as the qualitative and heterogeneous political matters that they are *before* production commences, as they are in the model here, where social funding of investment is determined by democratically determined priorities of social needs and reasonable estimations of the crucial relative social and environmental costs of production. And it holds at the completion of the process when the activities of Production Collectives are assessed. A 'balance sheet' comparing flows of investment funds to a production enterprise and the return flows from acquisitions of its output is no more than one bit of evidence among others regarding the effectiveness of social investment and production. No quantitative meas-

ure does away with the need of Production Collectives, Community Activist Groups, Community Associations, Producer Review Boards, Social Investment Centres, and so on, to deliberate about qualitative matters in every step of the process of producing for social needs. The fundamental question is always, 'Given the relative social and environmental costs of producing this product, does it effectively address a democratically determined social need enough to justify its production?'

The alternative is to let successful production be determined by individual expenditures of unequal purchasing power, based on the exceedingly narrow range of information about trade-offs conveyed by market prices when considered from the private standpoint of market agents, and then hope the political influence of those with concentrated economic power can be checked enough by regulations, taxes, and subsidies to correct the inevitable and massive distortions. I do not see how any argument could establish the superiority of the latter from the standpoint of a social order whose 'ruling purpose' is the full and free development of its members. Focussing on the quantitative comparisons of relative market prices and monetary returns renders the inherently political issues invisible.¹⁷ Treating political decisions as if they were private matters does not make them private matters. *Pace* Hayek, when market prices reduce the qualitative and incommensurable factors to homogenous quantitative units of market prices, relevant information is *removed* rather than transmitted efficiently. Relative social and environmental costs are real, as is the difference between effective production and ineffective production. They are not best evaluated through the lens of relative market prices and market profits. They are a matter for social deliberation and negotiation.¹⁸

An analogy with the points (runs, goals ...) made by teams in many sports leagues may illuminate socialist accounting. In most sports leagues, the amount by which a team won or lost one game is not carried over to the next.

17 In a different fashion central planning in state socialism depoliticised the inherently political as well, treating social production as a matter of logistics: 'The situation was – paradoxically – one where, under what Stalin termed "Socialism," planning came to formally resemble what we today call business logistics. For planning's soft budget constraints served to advance the efficient allocation of resources in the service of quantitatively determined economic growth without resulting in over-production – two of the core aims of contemporary logistics' (Mandarini and Toscano 2020, p. 18; see also Toscano 2014, Bernes 2013, 2020). In another way, of course, the central plan was hyper-politicised, its goals an expression of the political will of the supposed vanguard (Mandarini and Toscano 2020, p. 21).

18 This was a major theme in Otto Neurath's writings on socialism (Neurath 2006; see also O'Neill 1996; Whyte 2020).

Winners do not accumulate the 'surplus' of points measuring their margin of victory in one game, giving them an advantage from the start in the next. Losers do not accumulate a deficit measuring the extent of their loss, putting them behind in the next game before play begins. At the start of the following game the score is tied zero-to-zero. Similarly, however many games a team wins or loses in a season, it starts the next season with a clean slate. No accumulation of surpluses bestows a head start in the next season. No accumulation of deficits places a team at the bottom of the standings before a single game is played. Nor can the total points accumulated in one season be used to dominate other teams in the next.

The points made or given up in a single game, the wins or losses in a given season, are markers for whether teams have accomplished the purposes of the collective endeavour (successfully scored, successfully prevented opponents from scoring, won games). The numbers provide evidence in support of a team's strategies for selecting and organising its members, its game plans, its implementation of those plans, and its ability to modify those plans as circumstances demand. Whether it scores more points in a particular game, and how many wins it has over the course of the season, matter. But accumulating points over a season or across seasons is not the aim.

As the overview of flows of investment and income allocations and expenditures in Section 4 explained, the units of account created by the Social Transaction Centre when entered in the accounts of different organisations and social agents, and then added to and taken away from those accounts in the course of production and exchange, provide evidence of how effectively social needs are being addressed, that is, evidence that Production Collectives have or have not been effective at selecting and organising its members, developing production plans, implementing those plans, and modifying them as circumstances demand. That is what matters. The numbers in the accounting balances do not have any other significance in themselves. They are not accumulated as surpluses giving a particular Collective social power in the next round of production. Neither are they accumulated as deficits that must be paid off. In an open-ended world of social freedom, where communities have the freedom to determine their own needs (within solidarity constraints) and producers have the freedom to determine how they can best help address those needs (within solidarity constraints), the target – the balance of production and social needs – is always moving. The social goal is to come reasonably close to hitting it in the given circumstances, making appropriate adjustments over time.

In capitalism, money comes as a package. It is a unit of account and means of exchange. Money in market societies is also a universal equivalent, a meas-

ure of value (in Marx's sense of congealed (indirect) social labour), a store of value for units of capital, and in the form of realised capital (M') an end in itself of the society as a whole. In the socialist model presented here, there is a unit of account tracking exchanges. But all other essential elements of money in capitalism are missing. There is no measure of value in Marx's sense of the term. Accounting prices in the socialist model represent a social estimate of the full social and environmental costs of directly social production, rather than a measure of the degree to which privately undertaken labour has retroactively been socially validated as (indirect) social labour. As a result, the disanalogies between money as we know it in capitalism and the units of account made use of in this model of socialism are far more important than any similarities. If we must use the term 'money' in both cases, there are good reasons to use (or imply) scare quotes when discussing this model of socialism (or use some other term like 'points' or 'quasi-money').

The stunted transmission of partial and distorted information through market prices has one clear advantage over production for social needs in socialism: speed. Price signals can be transmitted and modified much more quickly than the processes of deliberation and decision-making at the heart of the republican socialist model. The rate of product innovation, the rate of new enterprises forming, the rate established ones are dismantled, and so on, can all be expected to be slower than what we find in contemporary capitalism. No mode of production could possibly accelerate capitalism's hypertemporality, imposed by the drive to make as much profit as possible as fast as possible. If *that* were the proper measure of a successful society, then capitalism and its pricing system could not be surpassed. But it is not the proper measure.¹⁹

There is nothing natural about a world of hyperaccelerated change. Change for change's sake is not the proper end of social life, even less change for capital's sake. The proper purpose of society is the 'full and free development of every individual', and that end is not reliably served by the fastest possible rate of change. Far better to have a decision process heightening the chances of attaining the proper end than one that does not. This point has special urgency today, when the acceleration of the destructive dimensions of capitalism's 'creative destruction' is rapidly approaching limits that anyone caring about future prospects for human flourishing should not want crossed.

We also should not overstate the amount of time that decision-making in socialism will require. There may be some cases where extensive negotiations among Production Collectives, Sector Agencies, and Research Centres regard-

19 See Crary 2014.

ing a reasonable estimate of social costs of production are called for. But all parties have access to all relevant information (none is 'proprietary'). While the members of a unit of production have goals not shared by Sector Agencies and Research Centres, the goal of obtaining investment funds is only likely to succeed if their estimates of costs are reasonable. Finally, we can assume that few if any social agents associated with any of the three organisations want to waste their time. We can conclude that in most cases cost estimates will be within a reasonable range. Extensive negotiation will only be required in especially complicated cases with great uncertainties.

Radical uncertainty cannot be eradicated; the future always remains unknown. In capitalism uncertainty is met with the promise that if you privately accumulate enough of a special sort of thing – money in its function as a store of value – you can be protected in the future to the greatest possible extent. But the system offering this promise itself greatly compounds radical uncertainty, intensifying it far beyond what is inherent in our finite lives. The relative few who privately accumulate a critical mass of *that* very special sort of thing always remain uncertain whether they have enough to be adequately protected from the fickleness of future markets. For the rest of us, it is all too clear that we are not protected.

The best defence against radical uncertainty in the future is a society that makes the full and free development of every individual its ruling purpose, and that is a socialist constitutional republic. Capitalist money and the capitalist pricing system are incompatible with such a society. The socialist pricing system outlined above is not. It contributes instead to a social world where

[t]he general character of labour would not be given to it only by exchange; its communal character would determine participation in the products. The communal character of production would from the outset make the product into a communal, general one, The exchange initially occurring in production, which would not be an exchange of exchange values but of activities determined by communal needs and communal purposes, would include from the beginning the individual's participation in the communal world of products ... labour would be *posited* as general labour prior to exchange, i.e. the exchange of products would not in any way be the medium mediating the participation of the individual in general production, Mediation of course has to take place.²⁰

20 Marx 1986b, p. 108.

The institutional framework and social practices described above offer a way for the necessary mediation to occur. At this point, however, the case for republican socialism is quite incomplete. We have so far only examined production for social needs in terms of local producers producing to address local needs. A model of socialism must include far more.

Regional Networks of Production and Exchange

In the previous chapters we have looked at the proposed socialist system of institutions and practices from a very abstract perspective, bracketing out everything that did not have to do with local production for local social needs by local producers. But if ‘socialism in one country’ is neither feasible nor desirable, that is emphatically more the case for a merely local socialism.

The task of this and the following chapter is to show how the model could be scaled-up. The present chapter focuses on social production for social needs across localities in an extended regional territory, somewhat analogous to a particular state within the United States or one of the 16 states that make up the Federal Republic of Germany.

Following some general remarks about the regional level of the model (Section 1), some issues regarding the role of the solidarity constraints on this level are examined in Section 2. A few inadequate frameworks for addressing these issues are rejected before a more acceptable framework is proposed. The need for social coordination of social investment on the regional level is discussed in Section 3 along with the form such coordination might take.

Earlier chapters have stated that an important factor in allocating social investment funds to Production Collectives is their past record and future promise of innovation. Innovation, however, is not the responsibility of Production Collectives alone. Section 4 discusses the central role of regional innovation systems in maintaining the innovative dynamism of a socialist society. The fifth and final section consists of concluding remarks.

1 Some General Remarks on Regional Production

One of the important lessons of world history is that concentrations of centralised power tend to generate a host of social pathologies, including: 1) social agents based in localities tend to be alienated from the centres of power where decisions affecting their lives are made; 2) decision-makers in distant centres of power tend to lack adequate knowledge of the concrete local contexts where their decisions will be implemented; as a result, 3) their decisions are not reliably appropriate to those contexts; 4) feedback from the local level tends to fail to bring about timely and adequate shifts to more appropriate policies; and 5) elites possessing centralised power are prone to abuse it, even when they are formally accountable to those subject to their decrees.

Extreme decentralisation avoids, or at least weakens, these tendencies. But it raises others, no less serious. When localities function autonomously, 'solidarity' with those living places outside the given area tends to become a mere abstraction, a pious word unrooted in concrete material practices. The resulting social fragmentation eventually will almost surely prove incompatible with a solidarity society.¹

A socialism based upon collective learning processes must incorporate both points. The *principle of subsidiarity* was included in the proposals for a socialist constitution in Chapter 4 does this. In abstract terms, the subsidiarity principle endorses a social framework exhibiting a complex dialectic of centralisation and decentralisation, a dynamic balance where decisions are generally made at the level where they have the greatest effects, by those who will be most affected by them or their democratically accountable representatives. That, of course, is just an abstract precept. The important questions remain unanswered: What issues should be addressed on which levels, and why?

Chapters 4 and 5 were based on the principle that decisions primarily affecting local production for local needs are generally best decentralised to the local level. The universal₁ needs of the local community in the coming period and how they are best addressed are defined by the members of the local community themselves and their representatives. Decisions regarding the particular goods and services that address the universal₂ and particular needs in the local community are made by the members of that community themselves. Priorities among local social needs are also set on the local level, as are investments in local producers, the organisation of local production processes, and the products that address social needs. Local Community Activist Groups, local Community Associations, local Democratic Assemblies, local Producer Review Boards, local Social Investment Centres, local public forums and referendums of local citizens, all contribute to self-governance on the local level.

Even on the local level of the model of republican socialism, however, there are elements of centralisation. Some are on the local level itself: Democratic Assemblies, Social Investment Centres, and Public Referendums all make decisions for the local community as a whole. Other forms of centralisation go beyond the local level, such as the Sector Agencies that compare and contrast the performance of all production enterprises operating in a sector in

1 This is a major theme of Suvin 2016, a brilliant exposition of the lessons of Yugoslavia's fragmentation for socialist projects in the twenty-first century.

the country as a whole. The highest-level international Democratic Association (discussed in Chapter 9 below) defines the basic universal₂ needs that must be addressed throughout the socialist realm. And the international Social Transaction Centre (also discussed in Chapter 9) is the source of the funds flowing to the local community for the production and acquisition of goods and services addressing local needs.

The first general point to be made here is simply that the needs of any local community cannot be adequately addressed solely by local units of production. While few would dispute that assertion, it is still worth considering some reasons for its validity.

* From the beginning of human societies needs in local communities have exceeded what local producers have been able to provide. Anthropologists and historians have documented exchanges of goods extending across continents from the moment our species spread over those continents. It is simply not plausible to think that a dimension of human life that has persisted from the start of our species' spread on the planet will suddenly cease with socialism, however much its social forms are historically specific.

* A related consideration is based on the straightforward fact that there has never been and will never be a completely closed and self-contained community, unaffected by others elsewhere.² Ideas in general, and those regarding needs and how they might be addressed in particular, cannot be contained within territorial borders.

* It is no less implausible to hold that economies of scale will no longer matter once a socialist framework has been established. Costs of production always matter. Socialism is distinguished by the comprehensiveness of its concern for social costs (emphatically including the social costs of contributing to planetary states unsuited to human flourishing). If the social and environmental costs of producing a specific sort of good were significantly reduced by having a producer operate on a scale beyond that needed in its locality, and if that additional output could effectively address needs elsewhere, there is a *prima facie* case for social investment in production on an expanded scale.

2 Quinn 2024. (It is worth noting in passing how the social ontology of ethnonationalism could not be more mistaken.)

* Producing on an extended scale has implications for the members of Production Collectives as well. These Collectives in socialism are committed to designing labour processes mobilising their creative intelligence. This does not generate a general tendency for embodied skills and tacit knowledge to become homogenous across sectors. Sector specific embodied skills and tacit knowledge will emerge in socialism in the course of 'learning by doing'. When social investments enable two Production Collectives operating in different sectors in different localities to each expand to serve the other's area, operating on that greater scale tends to enable the members of these Collectives to develop greater tacit skills and more embodied knowledge than they would otherwise have developed. Each group can then contribute more effectively to addressing democratically determined social needs. The expansion of human capabilities from specialisation on an expanded scale is a social good in itself, apart from any beneficial consequences it might have on levels of output.

* Technology studies have confirmed that innovation is not at all solely a matter of research and development. The embodied skills and tacit knowledge of those involved in the implementation of innovations in the production process are absolutely crucial as well.³ Insofar as an expansion of productive capacity leads to greater embodied skills and tacit knowledge, there will be a general tendency for a higher level of innovative dynamism in the society.

* The contribution to innovative dynamism from production on an expanded scale is not limited to the development of the capacities of Production Collectives operating regionally. The 'agglomerative effects' of *regional innovation networks* need to be taken into account as well.

The importance of agglomerative effects in the socialist model warrants further discussion.⁴ It is unquestionably the case that the innovation process in capitalism has been limited and perverted by being part of a system with an alien, inhuman, insane ultimate purpose, the accumulation of a delta M (the difference between M' and M) as an end in itself. As a result, there are few features of capitalism that can be directly incorporated into socialism. But socialism does

³ Berger 2013.

⁴ Walker and Storper 1989 remains an unsurpassed account.

not have to reinvent the wheel, and socialism too can benefit from the agglomerative effects of regional networks.

In a narrow sense of the term, regional innovation networks in capitalism unite a number of large productive enterprises in a particular sector (or closely related set of sectors) with a number of smaller suppliers and distributors in the same region in a complex mixture of short-, medium-, and long-term relationships. In a broader sense regional innovation networks today include investors specialising in financing high tech firms (banks, venture capital funds, angel investors, and so on); educational institutions and training programmes producing workers with general background knowledge, generalised skills, and sector-specific knowledge and skills enabling them to effectively contribute to projects in that sector; research universities carrying out basic research and medium-to-long-term research and development projects advancing the scientific-technical envelop in areas of significance to the sector; sites where social agents operating in the given sector can engage regularly in informal interactions talking shop; other sites for formally organised presentations and discussions; cultural activities addressed to the cultural interests of those agents; research parks where start-ups are nurtured as they establish 'proof of concept' of an innovation, potential market demand for it, the prospects of scaling up its production, and so on.

Information and communications technologies have not made the world 'flat' and homogenous. Regional concentrations of firms, banks, venture capitalists, universities, research parks, and so on, with special expertise in specific sectors have proven able to develop innovations in their sectors more effectively than regions lacking the agglomerative effects of their interactions. The number of organisations and institutions required to establish an effective innovation network exceed what any one locality can provide. The smallest effective geographical unit appears to be a region. Geography matters in a social world governed by capital's valorisation imperative.

Geography will continue to matter in a social world whose ruling purpose is the full and free development of every individual. In socialism too the collective energies of social subjects can be unleashed when those sharing interests and committed to similar or related projects interact frequently and spontaneously in face-to-face communications in formal and informal settings.⁵

5 Collective energies can also be unleashed effectively without face-to-face interactions. This is a case of both/and, rather than either/or. In Chapter 11 we shall explore how socialism can use electronic networks to unleash collective energies on a global scale beyond what is possible in capitalist market societies.

A dynamic socialist society will not leave innovation to individual inventors and enterprises scattered in separate localities. It will include regional clusters of organisations, as well as formal and informal networks of those engaging in activity relevant to a specific sector (or set of closely related sectors).⁶

The benefits from economies of scale, the development of embodied knowledge and tacit skills due to specialisation, and the contributions of regional innovation networks, do not imply that local production for local needs will be insignificant in socialism. Transportation across localities and regions may involve excessive environmental costs. Local producers can be expected to be more attuned to local needs and be able to respond to them more quickly. There is also no inherent tendency to centralisation and concentration of units of production beyond the local scale in our model of socialism. The socialisation of investment and production eliminates the 'Grow or die!' valorisation imperative. As part of the commons, a Production Collective cannot be bought up by another wishing to expand. Sector Agencies are charged with aiding local Production Collectives adopt best practices and innovations, reducing the need to look outside the community for quality products at reasonable cost. It is also worth stressing how much local production for local needs is systematically hampered in capitalist market societies by monopolies non-local corporations enjoy due to intellectual property rights. In the socialist model advocated in this work, the knowledge commons is not enclosed by intellectual property claims granted and enforced by the coercive powers of the state. If socialist production on a regional scale occurs, it occurs because a democratic process of deliberation has revealed that this can be reasonably foreseen to further the 'all things considered' social good in particular cases. That is quite different from a general tendency imposed by the alien force of the valorisation imperative, regardless of social consequences on local communities.

Taking these considerations into account, the dialectic of centralisation and decentralisation in our socialist model likely leads to greater local production for local needs than found in contemporary capitalist market societies, despite the benefits of economies of scale and other positive features of expanded production and even with advances in less environmentally harmful forms of

6 Needless to say, regional specialisation in a sector (or relatively small number of sectors) implies that the particular region in question is *not* specialising in other sectors. Regional specialisation, therefore, requires interactions and exchanges to occur not just across localities in the given region, but across regions as well. This point will be put to the side until the following chapter.

transportation (sure to be a high priority in socialism). Nevertheless, a purely 'localistic' socialism cannot be endorsed. A plausible model of socialism must include production addressing social needs in other localities than the one where the production took place.

Taking regional-level production into account without abandoning the key components of the socialist project requires additions and modifications to the framework presented in previous chapters. Three alternative ways this might be accomplished are considered in the following section. Only one of them is viable.

2 **Regional Production for Social Needs and the Solidarity Constraints**

In capitalist market societies, production for market exchanges across localities necessarily tends to be incompatible with socialist principles of solidarity. As we examined in Chapter 2, regions with a competitive advantage at the beginning of a given period tend to reproduce or even reinforce that advantage, while those regions that begin behind tend to become trapped in the vicious circle. While development in certain regions of capitalism have been striking, the relative stability in rankings of wealth and poverty across the globe – and the severe poverty and inequality reflected in those rankings – is striking as well. A strong correlation between economic injustice and environmental injustice is also part of the picture, with poor communities far more likely to become 'sacrifice zones' of capitalist development for generations.

A solidarity society must eradicate the systematic tendency to uneven development and environmental injustice. The two socialist constraints proposed for a republican socialist constitution in Chapter 4 express this commitment. A model of socialism needs to establish how these abstract principles could have material actuality. The answer is fairly straightforward when we abstract from everything except local production for local needs: every locality receives its per capita share of investment funds, and no locality can impose more than its per capita share of the total permissible environmental footprint from human activity. When we introduce expanded production for exchanges across localities in a region, complications arise. Given the importance of the solidarity constraints in the version of socialism defended in this book these complications must be addressed.

2.1 *Two Thought Experiments*

A simple adjustment to the model presented in Chapters 5 and 6 allows producers receiving social investment from a local Social Investment Centre to offer their output to consumers and producers outside the locality, and local consumers and producers to use their funds to acquire goods produced in other localities. These activities cause few difficulties in capitalist market societies, where nothing like the two solidarity constraints comes into play. Matters are quite different in a society committed to no one being socially disadvantaged simply because they live in one place rather than another. If a significant proportion of a locality's allocated social investment funds were allocated to producers whose output is used to address needs elsewhere, members of the local community would have reason to fear that local needs would not be adequately addressed. If a significant proportion of a locality's allowable environmental footprint is used up by such producers, that too would raise local concerns. If these worries are not successfully alleviated, the dynamic balance between particularity and universality the socialist model aims at would break down in the region.

We can imagine circumstances where local worries about regional production would not arise. The two considered in this subsection, however, cannot realistically be incorporated within republican socialism.

Imagine for the sake of the argument an extremely simple case of regional exchanges of output produced in two different localities. Suppose Production Collectives in each place devote the same proportion (two thirds, say) of their investment to producing goods for the local community, while the remaining (third) is used to produce output exchanged elsewhere in the given region. Suppose further the environmental footprints from production and use of the products exchanged between localities are roughly comparable. Each community's share of aggregate investment and share of the aggregate environmental footprint would then remain precisely what it would have been had all output of local producers been directed to local use. The socialist accounts tracking each locality's expenditures and environmental impact would be somewhat more complicated. But no other adjustments would be required to maintain the solidarity constraints, so long as the two sets of local Social Investment Centres maintained the same ratio between investment in local production for local use with only local environmental impact, on the one hand, and local production for non-local use with non-local impact, on the other, while not exceeding each locality's allocated share.

It is logically possible for this state of affairs to be maintained indefinitely across an extended region with units of production in many localities producing producer and consumer goods acquired in many other localities in the

region, while continually maintaining the same local/regional ratios. Each set of local Investment Centres would in effect be funding production for other regions in approximately the same proportions. If the proper pattern were maintained, local Social Investment Centres could fund enterprises producing products for use outside the local community as if their output were all used within it. No extra tasks would be imposed on their deliberations and decision-making. No other source of investment funds would be required. As long as no locality captured any special benefit from this arrangement, none would have reason to complain. And all would have reason to approve of the arrangement if it enabled social needs to be addressed more effectively than would be the case when all production is local in scope. The mutual interdependence characterising a solidarity society would be manifested in the region, excluding from the start any tendency to uneven development.

One obvious problem here is that the proposal relies on there being in every locality roughly the same proportion of Production Collectives with the capability and desire to produce on a regional level at a roughly comparable level of effectiveness. There is, of course, no reason whatsoever to make that assumption. It also relies on local Social Investment Centres (with the aid of local Producer Review Boards, local Community Activist Groups, local Community Associations, and so on) in the region all being fully competent to evaluate a Production Collective's record and likely future effectiveness in addressing social needs outside the locality. Assessing local production for local needs is complicated and challenging enough. To ask those whose primary focus is on local matters to extend their focus to the required extent would almost surely overburden them, something a feasible model of socialism must avoid.

Another issue concerns the principle of subsidiarity. Communities where there is a strong consensus to invest mostly in local production for local needs would not be able to do so. Or those that didn't care so much about the level of local production (perhaps because of a concentration of retirees) would not be allowed to acquire what it needs from elsewhere to the desired degree. In other words, the fact that members of different communities do not wish to all maintain the same ratio of local/non-local production and acquisition of goods would not matter, despite the importance of the principle of subsidiarity in the socialist project. The freedom of individual social agents to decide for themselves what goods best address their needs would be restricted, despite the commitment of republican socialists to affirm this freedom.

Many of these difficulties do not arise in a second thought experiment. Imagine that the investment funds and environmental footprint of a Production Collective producing on the regional level are assigned to the localities where the output was used rather than where it was produced, with the envir-

onmental costs of the transportation also counted towards the permissible aggregate environmental footprint of the locality they are transported to. The members of a local community would then not have production for their needs limited by local producers producing for other localities in the region. This 'solution', however, is also untenable.

In this second case local Social Investment Centres must now anticipate *ex ante* (that is, prior to allocation decisions) which local needs will be addressed by Production Collectives located elsewhere in the region. They also must anticipate which local producers will address needs of other localities in the region. And they must anticipate all the relevant quantities and costs. Estimates that are fully reasonable *ex ante* can still prove to be significantly inaccurate *ex post*. Considerable adjustments will then be required to maintain the solidarity relationships among communities. If members of one community end up acquiring many more goods from elsewhere than were anticipated, adjustments could not wait until the next planning period. They would have to be made after annual reviews or perhaps even before, with funds previously allocated to local producers having to be reallocated to cover investment costs elsewhere. Perhaps the level of disruption and insecurity that results would be less than the continuous disruptions and generalised insecurity of capitalism. It would still be enough to weaken the case for socialism being a world historical advance.

Another potentially troubling worry is that a structural tendency for uneven development would arise as an unintended consequence of this form of regional production and exchange. Suppose those needing a product wished to obtain it from a producer outside their locality and that local Social Investment Centres knew this was the case. These Centres would refrain from investing in local Productive Collectives capable of producing it. How likely is it that in their requests for funding in the next period local producers would be able to make a stronger case to produce the output in question than the nonlocal enterprises that have had experience and success doing precisely that? An asymmetry between localities would become entrenched over time. If a significant number of very much needed goods flow from one locality to another in the absence of a matching reverse flow, over time it would become more difficult to say that social agents in the non-producing locality freely choose to obtain goods from producers based in other parts of the region. The material reality would be that they had become dependent on other localities. Such asymmetrical dependence should have no place in republican socialism.⁷

7 Asymmetrical dependence is only a tendency here, however. There are counter-tendencies. Apart from the special case of rare raw materials, exchanges across localities will occur only

A final concern is the additional burden that is placed on the members of local Social Investment Centres. Rather than focussing on allocating investments to local producers addressing local needs, they would have to take regional level production into account as well. Even if that is feasible in principle, the danger of overloading members of these Centres would still be a serious enough issue to consider whether there is a better alternative. Further, when a Social Investment Centre in one community considers establishing or expanding investment in a Collective producing output used elsewhere, it must first to obtain the funds from these other communities in the reasonably foreseeable proportions of their acquisition and use of the Collective's output. This will require extensive horizontal communication and coordination among Social Investment Centres in different localities. In addition, the contribution to the permissible environmental footprint of each locality made by the production and use of the particular product must be assigned in proportion to the use of the product in each place. This would also require extensive horizontal communication and coordination among Social Investment Centres in different localities. Given the extensive responsibilities assigned to local Social Investment Centres in Chapter 6, adding a host of new obligations does not seem advisable. The fact that capitalist investors easily allocate funding to both

when the advantages of specialisation of specific sectors in specific places (economies of scale, embodied tacit knowledge, background formal knowledge, concentration of agents with relevant skills, education, and training, formal organisation capable to providing relevant education and training, and so on) clearly outweigh increased transportation costs with their environmental footprint. This will not always be the case. Also, the members of local Social Investment Centres are likely to resist diverting a high proportion of their per capita share of investment funds to production for other localities. Local citizens and their representatives in local Democratic Assemblies that oversee local Investment Centres will strongly support measures to help local Production Collectives flourish. (The sentiment that being subjected to a subordinate power relationship through trade is incompatible with a solidarity society is sure to be strong throughout a socialist republic.) Further, if there are no private monopolies on the relevant scientific-technological knowledge embodied in production processes and products, the perhaps single biggest reason localities in capitalism must acquire goods produced elsewhere will no longer be in play. Finally, a Production Collective with a (temporary) competitive advantage over local producers must still sell its output at its cost price, excluding any 'mark-up' its members might benefit from. As a result, they have no special motivation to expand, apart from the inherent value of helping to meet social needs elsewhere and the fact that doing so improves their chances for renewed funding down the road. There are, then, strong countertendencies to the emergence of asymmetrical relationships of dependence among communities from the second option for maintaining the solidarity constraints after the geographical range of production and exchange in socialism has been extended to the regional level. Nonetheless, the fact that there is a tendency in that direction counts against it, even if this is not decisive in itself.

regional and local producers is not a counterargument. It is far less challenging to invest for private profits across a region than to invest to further 'the full and free development of every individual'.

Few today will be tempted to call for unaccountable central planners to allocate investments across localities according to some supposedly rational plan of their construction. Many more socialists will throw up their hands at the difficulties and opt for market socialism, leaving production and exchange across (and within) localities to markets while hoping any tendency to geographical imbalances can be checked through redistributive measures at some later point. Historical experience, however, has given us good reasons to doubt that market societies can reliably provide what a solidarity society requires, a combination of qualitative diversity across geographical areas with their substantive equality.

There were good reasons to propose the socialisation of investment and production on the local level. There are good reasons to call for the same socialisation on the broader geographical scale of a region. Neither enforcement of a rule maintaining a strict balance of inflows and outflows, nor horizontal coordination of investments among local Social Investment Centres in a region, can accomplish this task in a satisfactory and systematic fashion.

The model of republican socialism must instead incorporate a higher-level socialisation of investment and production beyond the local level.

2.2 *A Proposal: Regional Investment in Regional Production for Regional Needs*

In the expanded model of socialism defended here, investments in units of production whose output is devoted to addressing local needs remain the responsibility of local Social Investment Centres. For producers operating on a wider scale, the principle of subsidiarity ('decision-making should generally occur on the level most affected by those decisions') suggests that decisions regarding regional production are appropriately made on the regional level. This can best be done by scaling up the social forms of socialist self-governance to the regional level.

Many universal₁ needs are defined relative to specific localities. If, for example, a system of local bike lanes needs to be established in a city, a local Transportation Agency established and overseen by the local Democratic Assembly will receive social investment funds for that purpose. These funds are in effect social permission to mobilise the living labour of a local Production Collective with the appropriate equipment and requisite skill set for constructing a local system of bike lanes. Other universal₁ needs, however, are shared by local communities within a region. Familiar examples include the need for

a major airport or harbour or university serving the region as a whole. Such needs are appropriately addressed on the regional level.

In a vibrant socialist civil society, there will be regional level Community Activist Groups trying to mobilise support for regional networks, infrastructure, festivals, and other universal₁ goods. A regional Community Association will be charged with monitoring the provision of universal₁ goods in the region and providing regular quantitative and qualitative assessments. In the spirit of other proposals, perhaps local level Community Associations in the region nominate members who have earned the respect of their peers. Those nominated could provide a pool from which the members of regional Community Associations will be selected by lot. Or perhaps half the members of a regional Community Association could be selected by lot from the pool, with the other half selected randomly from the population of the region. Before the beginning of a planning period, the Association must also formulate a proposal for regional investment priorities in this category of goods in the coming years.

The bedrock list of 'basic' universal₂ needs is constant throughout the socialist order (see Chapter 5, Section 1.4 above). I proposed earlier that the members of a local Democratic Assembly could go beyond that list if they so choose. The complication to be added here is that the regional Democratic Assembly has priority in that any extension of the list it legislates must be accepted by all localities within the region. (They remain, however, free to extend what counts as a universal need beyond what the regional Democratic Assembly has decreed.) Another Community Association could be formed on the regional level to evaluate whether an extension is warranted. Its members can also be charged with determining priorities among this category of regional needs, as well as the extent those needs might be better addressed by social investment in Production Collectives operating on the regional level.

The democratic determination of particular social needs on the regional level does not require any additional steps. The social definition of particular needs in a region is simply the aggregate of particular needs in the localities of that region. A third regional Community Association should still be formed to consider when particular needs in the region might better be addressed through units of production operating on a regional level, and what the priorities for investments in those units might be.

Members of the three Associations then deliberate and decide on options for priorities for social investment on the regional level in the coming period. The regional Democratic Assembly then either accepts these options, requests modifications that the members of the Associations approve, or proposes a third option. If a Community Activist Group (or coalition of groups) is able to obtain signatures from twenty percent or more of the populace in the region for

a different option, it is added to the list. A series of (virtual and in-person) public forums discussing the alternative proposals will then be held in the region, followed by a referendum to select an option, making use of ranked voting.

Production Collectives that either have proven successful on the local level and have decided to request funding to address democratically determined regional needs, or those that wish to operate on the regional level from the start, submit requests for social funding to regional Social Investment Centres. Their proposals include an estimate of the social and environmental costs of producing on a regional level in the coming period. As before, the relevant Sector Agency and a Research Centre specialising in environmental science provide feedback regarding an enterprise's estimate, with the Collective remaining free to decide on a revision in response.

Sector Agencies and regional-level Producer Review Boards provide regional Social Investment Centres (and the public at large) their final assessments of the reasonableness of the final estimate of costs, the past performance of the Collective addressing social needs within that region (when relevant), and its future prospects of addressing those needs effectively, relative to both other units of production in the same sector (Sector Agencies) and to other units of production operating in that region (regional Producer Review Boards).⁸ Taking those assessments into account, along with the social needs in the region and the productive capacities of the Collective, a regional Social Investment Centre then decides whether to invest in it and, if it does, the level of the social investment. The number of Centres in a given region would be proportional to its relative population vis-à-vis other regions, with consideration of particular requests assigned to particular Centres randomly.

When the make-up of local Social Investment Centres was discussed, the importance of having members with a wide variety of practical experiences in self-governance was stressed. That point very much holds on the regional level as well. Perhaps local Social Investment Centres could nominate colleagues who have won the respect of their peers while serving on the local level, with half the membership of regional Social Investment Centres selected randomly from this pool in a manner ensuring broad geographical representation. The remaining members could be selected by lot from candidates nominated by

8 The Sector Agencies here are the same ones providing comparative assessments on the local level. The membership of Regional Production Review Boards could be determined in a two-step process. Local Production Review Boards could first nominate members with the respect and trust of their co-workers in these Boards, and then a random selection from that pool could be made. Or they could simply be selected randomly from the full set of those initially nominated by the members of Production Collectives in the region. Here, as in other places of the model, there are a number of reasonable options.

members of other institutions of self-governance in the region (Community Associations, local Democratic Assemblies, Worker Collectives, and so on).⁹ Once again ten-year terms for members of Investment Centres seem appropriate, staggered so that one fifth are selected every two years. At any given time, the majority of members would then have sufficient experience in the work of the Centres to provide guidance for new members.

If some selection mechanism like the one just sketched for selecting the members of regional Social Investment Centres, Production Review Boards, and Community Associations were used, members would be drawn from across the region. There would also be a strong tendency for those making those decisions to possess the requisite experience, expertise, and disposition to make good decisions. It would be extremely difficult for anyone to say that their local community was systematically discriminated against by regional level investment decisions.

It may seem more democratic to have the members of regional Social Investment Centres directly elected by people in the region, or even to have regional investment decisions be determined by voting after a period of public deliberation. But the same counterargument made on the local level applies here too: the commitments of time and effort required for informed decisions regarding candidates and proposals would far exceed what it is reasonable to expect people to be willing to provide, or be able to provide even if they were willing. There is an important role for direct participatory democracy in republican socialism. But it should not be the only democratic form in social life.

In our proposed model the solidarity constraints are applied to the local and regional levels separately. The principle that each locality has a right to its proportional share of investment funds and its proportional contribution to the aggregate allowable environmental footprint is still applied to local production by local producers addressing local needs. The principle that each region has *its* proportional share of investment funds and contribution to the aggregate environmental footprint is applied on the regional level. The Social Investment Centres of a particular region receive the same per capita amount of funds from the Social Transaction Centre for allocation to Production Collectives in their region as Investment Centres in other regions receive.¹⁰

9 Another possibility would be to have the regional Democratic Assembly select the members of regional Social Investment Centres. It is unclear whether that would increase the odds of people with appropriate experience, expertise, and disposition serving more than what would be the case with a random selection of those nominated by co-workers. On the other hand, the former might well increase the social distance between members of regional Centres and the local communities affected by their decisions.

10 The process of determining the relative shares of regional and local funding is discussed in the next chapter in Section 5.2.

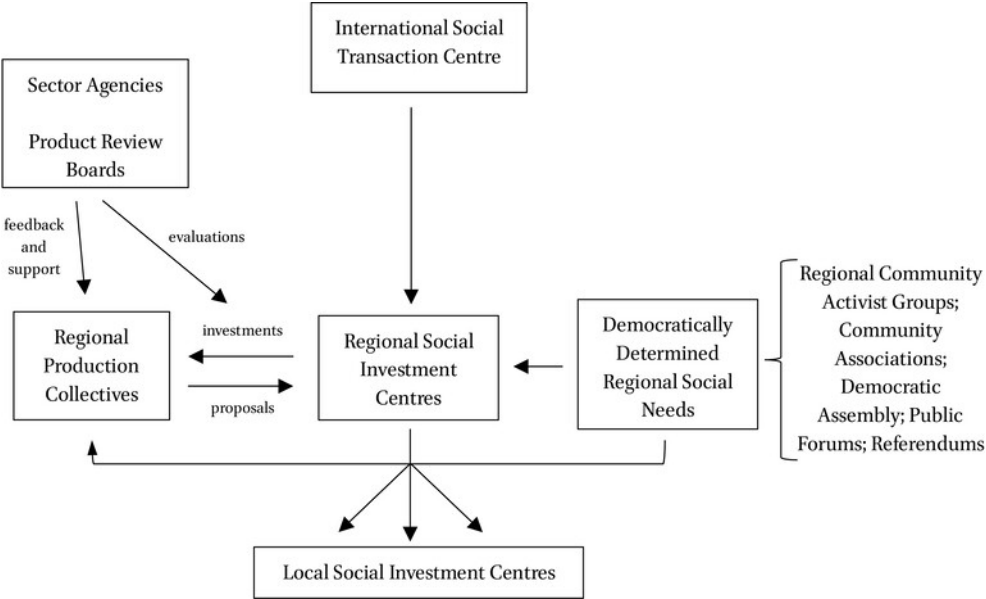


FIGURE 10 Regional production to address regional social needs

Strong forces of decentralisation remain after regional decision-making has been taken into account. Individuals decide their particular needs for themselves; local communities decide the priorities of local production for local needs; the collective powers of social labour within Production Collectives are mobilised by the members of those Collectives themselves; and so on. But it is also the case that there is centralised indicative planning on both the local and the regional levels. Decisions by local Social Investment Centres are horizontally coordinated to ensure social needs are addressed in the proper priorities while maintaining solidarity relationships (see Chapter 6, Section 1.2 above). Social investments on the regional level involve horizontal coordination as well. Here too a two-step process seems appropriate. In the first phase particular Investment Centres make investment decisions separately, taking into account the decisions of other Centres in real time. In the second phase they alternate, each mandated to allocated social funds for addressing a social need of relatively high priority that has not yet been adequately covered by the preceding allocations. Figure 10 provides an overview of the structured process on this level of the model.

In addition, vertical coordination between regional level Investment Centres and local Centres must take place. The combined horizontal and vertical coordination is especially important for the formation and maintenance of regional supply networks. The coordination of investment decisions can be illustrated through a discussion of those networks.

3 Regional Production Networks and the Coordination of Social Investments

An essential goal of social investment is to establish and maintain well-functioning networks of suppliers. It makes no sense to invest in units of production unless complementary investments are made in units capable of providing them with necessary inputs. On the local level horizontal coordination among local Investment Centres must take into account the need to coordinate investments in local producers and local suppliers.¹¹

When some producers produce for an entire region, it is not necessary that suppliers be located in the same locality as the Collectives they supply. And by definition when suppliers operate on a regional level, not all enterprises they supply will be located where they are. When suppliers of regional producers themselves operate on the regional level, Regional Investment Centres fund them. In contrast, if a Production Collective chooses to remain locally oriented, producing for enterprises in its locality – including those that distribute their products across the region – it is producing to meet the needs of local producers. Their funding is obtained from a local Social Investment Centre.

We cannot assume that local and regional Social Investment Centres acting separately will spontaneously establish and maintain the networks of suppliers and producers required for regional production networks. Too few suppliers of necessary inputs, and it will be difficult if not impossible to establish a regional system. Too many, and social and material resources that could be devoted to meeting social needs are wasted in duplication. There is little chance effective networks would result from uncoordinated investment decisions.

In capitalist market societies, coordination is generally imposed by firms at the centre of extended supply chains characterised by fundamental disparities of power, whether the power of a firm like Apple over suppliers in a producer-centred supply chain, or the power of a Walmart in a distributor-centred chain. This arrangement amplifies pressure on the weaker firms at the periphery of these networks to cut costs and lower prices. Firms at the centre can then increase their profit margins (or, less politely but more precisely, they can appropriate surplus value produced elsewhere in the supply chain through the superexploitation of local workforces), while still leaving sufficient profits for the owners of the periphery firms.¹² Supply chains in capitalism have proven

11 The same holds, of course, for producers and distributors. The cases are parallel, so there is no need to consider Distribution Collectives separately.

12 See J. Smith 2016.

very effective at mobilising the collective creative powers of living labour. But they have done so through oppressive and exploitative social relations.

In so-called state socialism, coordination occurs primarily through the commands of unaccountable central planners. That is not the socialism of a solidarity society. Part of the world historical task of a socialist model for the twenty-first century is to offer a framework for mobilising creative social energies on a scale beyond that of local communities without either class exploitation or the oppression of a ruling stratum.

As we have seen, the workers selected to serve on Sector Agencies aid Production Collectives in their estimations of future costs and Social Investment Centres in assessments of requests for social funding. They are also charged with providing support services to Production Collectives in that sector, providing information about promising innovations in the pipeline, aid in adopting best practices, feedback on estimates of production costs, and so on. In order to accomplish these tasks, each Sector Agency must collect and process extensive information about the operation of enterprises in its sector, both large or small, and both those producing final products and those producing inputs for other producers. Each Agency thereby acquires extensive information regarding the sorts of inputs each Production Collective has used, the Collectives from which they have obtained these inputs, the effectiveness of their use of inputs relative to other final producers, the qualities and production costs of the inputs relative to other suppliers, and so on. The members of Sector Agencies also have the training and knowledge to make reasonable judgements regarding which other firms in a sector have (or could easily develop) the capacity to provide similar inputs and final products.¹³ Their connections with Research Centres whose work is relevant to the specific sector also gives them a reasonably good sense of innovations coming down on the road affecting production processes.

13 It might seem that the members of Sector Agencies expected to acquire and assimilate the information required to perform these duties would be overloaded far beyond their capabilities. Acquiring the relevant information is straightforward. None of it is proprietary; all of it is publicly available. As for the capacity to assimilate it, we need to recall that they have extensive experience working in the particular sector. Participating in the self-governance of their workplace for years gives each a deep understanding of the relevant matters with respect to their own enterprise. Formal and informal discussions with each other enable them to develop a general sense of the range of variations on the relevant matters in their sector. This provides a cognitive framework enabling them to assimilate relevant information about other collectives without burdening them with responsibilities beyond their capabilities. (We should also recall in this context that the national Agency for Technical Support providing support staff to Community Associations (see note 14, Chapter 5) supplies technical support to Sector Agencies as well.)

Regional and local Social Investment Centres have full access to the information Sector Agencies have collected, processed, and evaluated about suppliers and final producers operating in their areas. This information provides the starting point of an allocation process that can establish and maintain production networks without a centralised bureaucracy imposing a comprehensive ex ante plan of inputs and outputs – and without firms with a high concentration of market power organising networks benefitting themselves at immense social costs. I shall consider two ways this might be accomplished, recommending the second.

In the first, the two-step investment process introduced in Chapter 6 is maintained with modification. In the first step the Social Investment Centres on the local and regional levels make the easy decisions, funding the producers of final products and the suppliers of inputs who have proven (or promise) to contribute the most to production for social needs. The modification is simply that now regional Centres allocate social investment funds to the most promising regional producers and regional suppliers, while local Centres continue to take into account local suppliers of regional producers who happen to be based in the same locality. Both regional and local Centres are able to track in real time the investments other Centres make. When an investment made by one Centre contributes to addressing an inadequately addressed social need or builds up the productive capacity of either a final producer or potential supplier, all other Centres will instantaneously know this. As a result, excessive duplication of investment can be avoided. Nonetheless, when this first step concludes, significant social needs will undoubtedly remain inadequately addressed, as noted in Chapter 6. It is also extremely unlikely that the productive capacity of potential users of supplied inputs and the productive capacity of their potential suppliers will adequately correspond.

In the second round, allocations are made sequentially, the relatively fewer regional Social Investment Centres taking their turn at regular intervals. Computer programs can be easily designed to point out where the greatest areas of inadequately addressed social needs remain. These same programs can also show where there are significant imbalances of productive capacity between final producers and suppliers. Each Social Investment Centre is under a mandate to take that information into account in the second round of allocations.

The selection of members of the Social Investment Centres from a pool of those with relevant experience and the respect of their peers provides a good reason to think they will be both capable and internally motivated to make the appropriate allocations. Further, if the social investment process is distorted by the private interests of members of some Investment Centres (for example, per-

sonal relationships with managers of enterprises seeking funding), the public and transparent nature of the process will quickly bring that to light. Community Activist Groups, Community Associations and Democratic Assemblies (representing the community and the individuals and groups within it), Sector Agencies (committed to the health and dynamism of specific sectors), and Production Review Boards (representing the local or regional community where the Production Collective is located) will be quick to note when investments flows do not further the flourishing of sectors and communities, and to demand that any significant problems be corrected. In cases of manifest incompetence the local or regional Democratic Assembly is given the power to replace members of Social Investment Centres, and in (hopefully rare) cases of maleficence the socialist judicial system will need to come into play.

Having both regional and local Social Investment Centres make allocation decisions at the same time adds a high degree of complexity and difficulty to their tasks. While mistakes can be corrected in the course of annual reviews (earlier, if circumstances warrant), the more mistakes can be avoided from the start, the more confidence in the viability of the model is justified. Fortunately, there is a much simpler way to socially organise the needed vertical and horizontal coordination between regional and local Social Investment Centres: have the extended periods covered by the indicative plan overlap rather than coincide.

Suppose a five-year funding cycle on the regional level began a year after the start of the present period for local Centres, well before the beginning of the next extended period of investment on the local level (see Figure 12 in Chapter 9, Section 2 below). Regional Centres would know what local suppliers of regional producers were in place, and which local suppliers had (or could relatively easily develop) the potential to supply regional producers in their locality if the social need to do so were great enough (since that would improve chances of future social investment). They would also have information about any concerns with the quality or quantity of their output. Similarly, knowing the investments regional Centres had made at the start of their investment cycle two years ago would greatly aid the deliberations and decision-making of local Centres at the start of their own next extended investment period.

Even if advanced information technologies can help, attaining an adequate degree of horizontal coordination among regional Investment Centres and vertical coordination between regional and local Centres in a single two-step sequence would be immensely challenging. It is reasonable to fear that the deliberating and decision-making capabilities of the Centres' members would be overburdened. If they were, the attempt to correct mistakes would threaten to overburden the annual review process, leading to increased social uncer-

tainty. Solidarity would be undermined if particular Collectives could no longer be sure their requests for investment were adequately considered. Important social needs might go unaddressed. In the worst case the legitimacy of socialising investment decisions could be called into question. These dangers could be lessened to the point of insignificance when regional Centres and local Centres made decisions at different points in time, enabling each to take into account the other in a more reflective and transparent fashion than simultaneous decision-making allows. For all these reasons the model of socialism advocated here therefore incorporates overlapping planning periods.¹⁴

It is worth insisting again that we do not need – and in any case can never obtain – a model of socialism guaranteeing *ex ante* a perfect equilibrium of demand and supply. Economic dynamism and freedom from excessive centralisation are both furthered if suppliers and final producers in production networks decide for themselves what outputs to produce, what inputs to acquire, the producers from which needed inputs are acquired, and so on. As long as there is a rough correspondence in the region between the aggregate social investment for suppliers producing needed inputs and the aggregate social investment for units of production using those inputs, the formation of effective production networks can be left to the members of the two sets of Collectives themselves. This too is part of ‘worker self-governance’ in republican socialism. Public forums, Community Associations, national Sector Agencies, and other elements of the socialist model are able to provide local and regional Investment Centres with feedback regarding how effectively these networks address social needs, enabling a fine-tuning of investment flows over the course of a planning period as necessary, with the possibility of emergency interventions when needed.

Overlapping periods enable effective production networks in the region to be established and maintained while avoiding excessive duplication. Excessive duplication is also discouraged by the fact that duplication forces the solidarity constraints to kick in sooner than they otherwise would, preventing social needs from being addressed as effectively as they could be.

There is every reason to be confident that an institutional framework of the sort presented here would enable Production Collectives to concentrate on their ‘core competencies’ within flexible networks of other Collectives with complementary competencies. Relations among Collectives within these net-

14 This proposal has a further benefit as well. When the forums and referendums regarding regional needs were held in a different year than those determining social needs and their priorities on the local level, the demands of time and effort on members of the society would be spread out in time rather than concentrated in a manner overburdening them.

works are characterised by the 'mutual recognition' Hegelians and liberal egalitarians speak of. But 'mutual recognition' here is not the abstract moral ideal it condemned to mostly be in market societies, defined as they are by a competitive war to the death. In republican socialism mutual recognition is materially embedded in institutions and social practices, actualised in Production Collectives within regional production networks, as well as within the regional community as a whole.

Two final remarks can be made before concluding this section. First, the random selection of the members of Social Investment Centres from across the region and the oversight of elected regional Democratic Assemblies, Community Activist Groups, the socialist judicial system, and so on, justify the expectation that regional Investment Centres will tend to disperse investments in regional Production Collectives across the region. But there is no mandate in the model to allocate each locality the same per capita share of regional investment. Some geographical disparities of aggregate income, population, cultural amenities, and so on may arise. At this point we should remind ourselves that while republican socialism is egalitarian – more egalitarian than any previous system of social forms in recorded history – it is not based on a demand for strict formal equality always and everywhere. Each locality benefits from the goods and services provided by regional production. And in the model presented here each locality retains its fair share of social investment for local production to address local needs, as well as its fair share of the acceptable aggregate environmental footprint. There is no systematic tendency for there to be disparities of life chances in different places, as there is in uneven development in capitalism.

Finally, regional Democratic Assemblies must also help coordinate local investments when that is appropriate. Suppose, for example, that adequate access to a public beach in one city requires a road in another. If disputes regarding such matters cannot be resolved by the parties directly concerned, the regional Democratic Assembly provides a forum for discussion and decision among representatives of the wider community, most of whom are not parties to the dispute. The relevant local Investment Centre(s) can then be instructed to implement whatever decisions are made by the Assembly. A satisfactory resolution is never guaranteed. But without distortions imposed by concentrations of private wealth or unaccountable political power the members of the regional Assembly will tend to gravitate to a resolution that both the disputing parties and those not directly involved consider reasonable or, at least, not unreasonable.

4 The Regional Innovation System

A point made earlier in this chapter bears repeating: the innovation process in capitalism has lessons relevant to the socialist project. Regional clusters of individuals with general background knowledge, specialised scientific-technical knowledge, informal tacit knowledge from experience ('learning by doing'), and a personal commitment to participating in projects mobilising their creativity, have proven able to generate a higher level of innovative dynamism than in a social world lacking such geographical clusters.¹⁵ The agglomerative effects won when suppliers are in reasonably close geographical proximity to producers also furthers innovative dynamism. Flows of formal and informal communication between producers and suppliers enable each to contribute to the problem solving of the other.¹⁶ These considerations justify giving regional-level decisions regarding the development of regional innovation systems a significant role in a socialism for the twenty-first century.

As mentioned at the beginning of this chapter, effective specialisation in a sector requites a variety of social institutions on the regional level. There is a need for a world class university or universities operating at, or close to, the scientific-technological frontier of research in fields relevant to sectors of special concern in the particular region. There is a need for an extensive educational system including schools, colleges, universities, and training centres to provide those who hope to join Production Collectives operating in those sectors with both general background knowledge and the specialised knowledge relevant to sectors of special regional import, as well as continuing education and training in later life required to keep up with scientific-technological developments in those sectors. Research Centres will also have to complement the more general and abstract research undertaken in academic settings, exploring different possible applications opened up by advances in the scientific-technological frontier of special interest to sectors or regions, and soliciting issues for future research of importance to those operating in these sectors or regions.

¹⁵ See Walker and Storper 1989, Locke and Wellhausen 2014.

¹⁶ Why, then, have supply chains been so geographically extended? When forms of production are labour-intensive and not especially technologically challenging, the lure of profits drives capitalist firms to relocate production to low wage areas of the world market. The relocation of production to China by foreign manufacturers was a special case of great historical importance. China's networks of domestic suppliers, state of the art facilities, significant tax concessions, and – last but not at all least – the vast supply of cheap but skilled and disciplined labour offered to foreign firms came into play.

Innovations based on the basic research and long-term R&D performed in university labs and Research Centres can contribute immensely to meeting democratically determined needs. This contribution is fully consistent with simultaneously being concerned with advances in scientific-technological knowledge for their own sake (although even the most obscure finding may eventually contribute to social life in ways that cannot be anticipated when made).

A regional cluster of institutions should also include regional incubators, that is, research parks for newly formed Worker Collectives hoping to eventually introduce innovative products in the social world but needing time to work out bugs in product design, learn how to scale-up production, incorporate the training needed by members, and resolve any other impediment to effective operation.

Worker Collectives devoted to R&D are not likely to obtain adequate investment funding on the local level, where Social Investment Centres must focus on production for social needs in the given planning period. Special regional Investment Centres dedicated to establishing and maintaining an effective regional innovation system are a more appropriate site for obtaining social investment for this important social goal.

Regional Investment Centres must simultaneously invest in a range of start-ups and avoid excessive duplication. In a dynamic socialist society, there will be strong motivation to support experiments that promise to contribute to meeting social needs, knowing that failures are a necessary and part of the process of advance. As is the case for venture capitalists today, investing in a range of start-ups makes sense when only some are likely to eventually make good on their promise. Avoiding dead-ends and wasteful duplication is also important, of course, especially in light of the solidarity constraints. Here, as elsewhere, trade-offs need to be made. Here, as elsewhere, there is no one correct way to make them.

In the model being developed here, each region has a share of funds for regional investments in Research Centres devoted to basic research, medium-to-long-term R&D, research parks for start-up Collectives, and so on, distinct from the funds allocated to regional producers and proportional to its population size. The regional Democratic Assembly decides what percentage of the available funds is assigned to the different components of the regional innovations system. Universities labs and non-affiliated Research Centres should also be mandated to set aside a portion of their budgets for 'blue sky' and heterodox research projects for the same reasons. Other than that, allocation within the different components should be made by the experienced scientists and technologists entrusted to the task by their co-workers in elections. When a

start-up has proven capable of effectively producing products addressing significant social needs at reasonable social costs, it can request investment from a local Social Investment Centre (if it wishes to produce on a local scale in the coming planning period) or a regional Investment Centre (if it wishes to produce on a bigger scale).¹⁷

We should recall that the agglomeration effects of regional innovation systems so crucial to capitalism's innovative dynamisms did not emerge spontaneously. They could not have become fully established without considerable coordination. In capitalism planning on this level is undertaken by local and regional corporate and political elites, seeking competitive advantages for companies operating in their regions (and, needless to say, for themselves as well). For the more clear-sighted advocates of capitalism, the deprivations imposed on regions left behind are simply the price that must be paid for the dynamism of the regions with competitive advantages.¹⁸ It would be a major advance in world history if the benefits of agglomerative effects could be generated without gains to one region coming at the cost of others.

The dynamism of capitalism can appear as a commitment to change for the sake of change. Behind that appearance, however, we find change for the sake of capital. The dynamism that unquestionably sets capitalist market societies apart from others in world history has a non-human purpose (valorisation), generating contradictory consequences. Human freedom and well-being are simultaneously enhanced and undermined in both systematic and random ways. Advances in collective capabilities and technological artifacts are intertwined with exhaustion from overwork, generalised economic anxiety, socially induced boredom, epidemics of clinical depression, a proliferation of useless gizmos, unsafe products, environmental destruction, and countless other pernicious phenomena of daily life.

In contrast to capitalism's perpetual disruptions, significant changes in socialism will occur only when they respond to new needs for new ways of life that social individuals find more enriching than established ways. Human flourishing in its great multiplicity of forms will be a primary rather than an (at best) secondary consideration. A socialist indicative plan defined through the democratic determination of social needs in communities, the democratic

17 Discussion of the role of the public in the innovation process is postponed until the following chapter.

18 The ideologically inclined can piously appeal to the logical possibility that those who profit could in principle compensate others for their losses so no one would become worse off.

determination of production processes in workplaces, and the horizontal and vertical coordination of democratically accountable Social Investment Centres, may lead to a somewhat slower rate of social change. But it will generate a system of investment and innovation introducing changes that further 'the full and free development of every individual' to an unprecedented degree. That is what matters.

5 Conclusion

Following some general remarks about the regional level of the model in Section 1, the role of the solidarity constraints on this level was discussed in Section 2. Two inadequate frameworks for meeting these constraints were considered and rejected before an acceptable approach was proposed. Section 3 examined how the social coordination of social investments on the regional level is best organised. Section 4 turned to the regional innovation systems that help ensure the innovative dynamism of republican socialism.

Before concluding the chapter, it is worth recalling once again that the operative standard for evaluating a model of socialism is not the Garden of Eden. The process of establishing and maintaining production for exchanges within and across localities, well-functioning regional producer networks, and an effective regional innovation system (including the nurturing of innovative start-up Collectives) will not be based on perfect foresight. Mistakes will surely be made. A Production Collective could receive social investment in the expectation that other Collectives would choose to acquire producer goods from it but the expectation goes unfulfilled. An investment in a research project could appear fully reasonable at some time t_1 and turn out to have been a dead-end at some later t_2 . Members of a Collective emerging from an incubator centre might have reasonably hoped to offer a better way of supplying a necessary input for producing a good meeting a social need, only to discover that their output duplicated what other suppliers offered a better version of.

Even when investments can be retroactively seen as mistakes, they remain social investments determined within an extensive social process for the sake of a social purpose. Dynamism and innovation in social life necessarily involve trial and error. Innovation is often advanced as much by failures as by successes. Social labour does not cease to be social labour – and the full and free development of every individual does not cease to be the ruling purpose of social life – when a path of development socially affirmed after a comprehensive social process of deliberation and decision-making proves disappointing in unforeseen (and often unforeseeable) ways. The goal of a model of socialism is to present

a feasible and attractive model of a social framework counting as a world historical advance over capitalist market societies and so-called state socialism. I believe the institutional framework and system of social practices incorporating the regional level as described here contribute to this goal.

Decisions regarding investments in Production Collectives distributing output on a regional level within regional producer networks, and those that establish and maintain a complementary regional innovation system, are undertaken in our model after extensive collective deliberations combining elements of both direct and representative democracy. It is important to stress that the model here does not assume that all antagonisms, all disagreements, all conflicts, will be spontaneously overcome as soon as capitalism is abandoned. The ruling idea instead is that these conflicts can be resolved through extensive open deliberation and democratic decision-making better than through authoritarian political power, concentrated economic power, or some combination of the two. In republican socialism, the successes of regional production for social needs are collectively won, the risks of failure are collectively borne, the costs of failure are collectively shared, the lessons from failure are collectively learned and implemented. The three latter dimensions of a solidarity society are as important as the first.

It bears repeating that mutual recognition across localities cannot be merely an abstract moral demand. It must be actualised in material practices. If material practices result in one community depending on another for its survival in a manner that is not reciprocated, 'solidarity' becomes at best an abstract ought. If investment on a regional level results in each locality dependent on others for needed goods and services, while they in turn depend upon it, then solidarity arises from recognition of their symmetrical dependency. This latter state of affairs cannot be attained through a competition to the death for profits or by the dictates of unaccountable elites. It requires instead a form of indicative planning that over time grants every locality and every region the same per capita share of investment funds, while not enabling any locality or region to impose environmental costs on others that, if generalised, would undermine planetary states suited to human flourishing. A complex dialectic of centralisation and decentralisation along the lines sketched in this chapter is compatible with this goal. Neither complete local autonomy nor top-down commands from a regional power base are.

Socialism on the National and International Levels

The present chapter concludes the presentation of the institutional framework and system of social practices defining the core of ‘the realm of necessity’ in the model of republican socialism proposed in this book. After introductory remarks in Section 1 regarding the need for national and international levels of the model, Section 2 shows how the essential determinations of production for social needs defining the local and regional levels of the model can be transposed to the national and international levels. Special attention is given to describing how investment decisions across levels could be coordinated when the planning periods on the various levels overlap rather than coincide (Section 3). Section 4 considers two objections to the actualising the first solidarity constraint across national borders. Section 5 turns to the important roles of national and international Democratic Assemblies in the model, such as the establishment and oversight of specific Agencies charged with furthering specific aspects of ‘the full and free development of every individual’. The most important of these Agencies are discussed in Section 6. Section 7 considers the national and international innovation systems that are necessary preconditions for the innovative dynamism of socialism. The important role of science and technology juries in determining which of the paths for future development opened up by innovations are taken (and which are not) is highlighted.

If we were to assume a world where the capitalist world had been completely deposed once and for all in the dustbin of world history, the chapter could end at this point. But if we assume that there are parts of the world where capitalist social relationships remain hegemonic, the question of how the two regions might interact needs to be considered. Needless to say, the relationship would be extremely fraught. Attempts to anticipate it are obviously fraught as well. Nonetheless, some crucial questions in this context regarding environmental policy, trade policy, and geopolitical conflicts are considered in Section 8. Section 9 provides a brief concluding summary.

1 The Transition to the National and International Levels

The identity of social individuals is never simple and homogenous. Our identity is shaped by simultaneous membership in various communities, including households, workplaces, voluntary associations, perhaps membership in activ-

ist groups. Who we are is shaped as well by the geographical communities we live in, with their specific histories, cultures, and practices. We can now add to our membership in local and regional communities our shared life with fellow members of a national community and with all those sharing social life on the planet with us.

We are not biologically determined to define ourselves in terms of national identity. All national communities are imaginary; national state borders have been deeply contested; most today are contingent results of past aggressions.¹ Further, appeals to 'the nation' have typically defined national identity in a way privileging one social identity (class, political affiliation, ethnicity, religion, race, gender ...) within the territorial borders over another, while also discouraging solidarity with domestic or foreign 'others'. Given this arbitrariness and bias in historical national identities, why retain a national level in a model of socialism?

A pragmatic answer is that the sense of being part of a distinct nation is a legacy of world history that does not seem likely to dissolve when the reign of capital has been overcome. Socialists have ignored its salience in the past, allowing this form of identity to be appropriated by regressive forces with often tragic results.

There is a more principled response as well: if there were nothing in socialism in-between regional political forms and those operating on the level of the globe as a whole, that would be in tension with the principle of subsidiarity. Many political matters affect those living in an extended area incorporating a number of particular regions far more than those on the far side of the planet.

If all socialist nations guaranteed the same substantive freedoms and offered comparable opportunities, national communities would remain just as imaginary in an ontological sense. National borders would remain just as contingent. But nationalism would no longer be the pernicious force in human history it has been. Disputes would be far easier to settle without aggression. Pride in a nation's accomplishments and culture would be more likely to be combined with recognition of past faults, the lasting harms those faults have inflicted, and an appreciation of achievements elsewhere. And there would be less resistance to recognising that 'our' nation's contributions to humanity are never simply *ours*, never due solely to us.

The view that nations are self-contained and self-sufficient totalities, each a measure of itself alone, separated from other enclosed totalities, could not be more mistaken. There never have been, and never will be, any 'pure' com-

1 Anderson 1983 remains the classic work on these issues.

munities on any scale. Those in different localities, regions, nations are always learning from each other, always adapting, imitating, and revising practices and ideas developed elsewhere, as people in those other places are learning, adapting, imitating, and revising practices and ideas that can be traced to yet other roots. All localities, regions, and nations (and any other form of community we might care to consider) are in an endless process of ongoing dialogue, mutual influence, and the diffusion of social practices, shared narratives, aesthetic forms, and technological ideas, whether or not this is acknowledged explicitly. Individuals may identify with the accomplishments of their particular locality, region, or nation, hope that cultural memory of them persists for many generations to come, and endeavour to ensure that social practices established in their communities are reproduced. But a community with its culture, narratives, aesthetic forms, and social practices remains alive only if it continues to evolve, and social evolution is always as much a matter of appropriating what is 'outside' as developing what is 'within'. The 'other' is never truly *other*; the supposedly external 'other' is always already 'within'.² On all levels of social life there is never pure unity without differences, or irreducible differences without unity; there is always a complex and dynamic dialectic of unity-in-difference, whether acknowledged or not.

On a more material plane, if all regions across the planet had the same per capita share of investment funds and the same proportional share of the aggregate environment footprint compatible with planetary conditions conducive to human flourishing, no region need fear oppression from a national centre, and no national centre would benefit from regional oppression. A nationalist movement in a region seeking independence could accomplish its goal after winning sufficiently broad support without massive social disruptions in the nation it is separating from. (In contrast, when a prosperous region in a capitalist nation becomes an independent nation, the poorer regions left behind are in a much more precarious position.)

There are great complications here, of course. But there are compelling reasons to include a unit of political organisation between regions uniting a number of localities, on the one hand, and the globe as a whole, on the other, in a model of socialism.

Turning to the justification for including an international level in the model, the single most important consideration has been stated a number of times in this work already: socialist solidarity knows no borders. When Marx called for

² Evans 2008 and Quinn 2024 are important studies of the social ontology and historical evidence underlying these assertions, respectively.

a society whose 'ruling purpose' is 'the full and free development of every person' the 'every' was not qualified. Just as it extends to members of the local community where we live, and not just to our immediate family and friends, it extends to those living together with us in the same region and within the same national borders. And no sense of national identity is legitimate from a socialist point of view if it prevents (or even discourages) acknowledging that people elsewhere have the same fundamental right to live flourishing lives within flourishing communities as we do. *A socialism for the twenty-first century must be internationalist.*³

In different historical and social contexts different types of community have been proclaimed as *the* one that matters for individual or group identity. A major lesson of world history, however, is that none of them possess a 'natural' priority. From the standpoint of a solidarity society, what matters is that individuals and groups freely maintain a dynamic balance among them. Some may choose to commit more time and effort – more of themselves – to one sphere rather than another. But each plays an indispensable role in shaping who we are. Our simultaneous membership in different communities must be recognised and nurtured. Given that assumption, the unity of socialist nations within an internationalist socialist framework must have a place in an acceptable model of socialism.

The internationalist dimension of the socialist project does not aim to create a global empire, a coercive world state imposed externally on national communities. Nor is the goal a loose set of autonomous national units in merely external relationships with each other. The different local, regional, and national communities must be free to maintain evolving social identities based on distinct local, regional, and national ongoing concerns, even as they collectively construct new identities through new narratives on the level of the human community as a whole.

The abstract platitudes of liberal cosmopolitanism give lip service to internationalism. But its advocates have too often endorsed or at least accommodated capitalist globalisation. In the capitalist world system economic competition to the death of units of capital, networks of supply chains, regional innovation clusters and national innovation systems, and the thoroughly intertwined geopolitical competition among capitalist states, have ensured that cos-

3 It is worth recalling in this context that prior to Stalin's consolidation of power, no revolutionary Marxist thought that socialism could be constructed in a single country. The most fundamental unit of capitalism is the world market. A socialist alternative must be essentially internationalist to be a true alternative.

mopolitanism remains an empty ideal, a mere expression of moral piety. For a solidarity that knows no borders to become actual, a much different institutional framework and set of social practices is required.⁴

Hopefully socialist republicanism will one day extend to the entire globe. The model presented here, however, does not presuppose that has already happened.

The internationalist moment in socialism comes into play when issues significantly affect different national communities. For republican socialism to be actualised the processes of deliberating and deciding about these issues then take place within a higher-level social space. The moment of difference on the global level is expressed with affirmation of local, regional, and national decision-making powers for issues that primarily affect those levels, marshalling local, regional, and national historical legacies and cultures, along with affirmation of the rights of all across the globe to participate as equals in deliberations and decision-making on essential matters of global concern.⁵

Throughout this book the challenge has been to provide sufficient detail to allow the reader to judge whether republican socialism is objectively feasible and a clear normative advance over capitalism, recognising throughout that no one can legitimately claim to have a comprehensive vision of what the future will look like. This remains the goal when the model is extended to the national and international levels. As daunting as the challenge of establishing a socialist community on the national and international levels undoubtedly is from a political standpoint, from a theoretical standpoint extending the model of socialism to the national and international level does not impose unmanageable new difficulties. If the local and regional levels of the model presented in previous chapters are feasible and normatively attractive, we know what is now required: the social forms considered already need to be scaled-up once again.

2 **Production for Social Needs on the National and International Levels**

‘Production for social needs’ includes an open-ended commitment to foster any form of production – local, regional, national, or international – that can

4 Smith 2005.

5 This principle is subject to an important qualification. Local, regional, and national historical legacies and cultures warrant being incorporated into republican socialism only insofar as they do not systematically demean (let alone justify the oppression of) other historical legacies and cultures. Only then can mutual recognition be a material actuality on the international level.

be reasonably foreseen to address social needs more effectively than the relevant alternatives. The commitment to the subsidiarity principle and the inability of units of production to grow through mergers and acquisitions, borrowings from capital markets, reinvestment of retained earnings, corporate advertising, monopolies of intellectual property, or treating the environmental costs of transportation as 'externalities', point to production on a relatively small scale. But it is also the case that the significant advantages from expanded production due to economies of scale, enhanced development of tacit knowledge and embodied skills, and a faster rate of innovation are not exhausted with regional production. Production on a national (or international) scale can enjoy these advantages as well. When they can be enjoyed without unacceptable environmental costs, production on the national and international levels have an important place in socialism.

We have already discussed how the general framework for investing in production for social needs could be scaled-up from the local to the regional level. Extending the framework to the national and international levels follows the same pattern.

As before, we can begin with the democratic determination of social needs. In previous chapters we have noted the important role of Community Activist Groups, concerned with a specific sort of need (e.g. for education, health, or a liveable environment), the needs of specific groups (especially those historically marginalised), or some other focus. We can assume that there will be Activist Groups with voluntary membership operating on both the national and international levels, in most cases affiliated with regional and local groups. Their function is to spur ongoing public discussion about the present shortcomings of need provision on national and international levels as well as possible future improvements.

National- and international-level Community Associations can be formed consisting of individuals randomly selected to provide a diversity of representation (geography, occupation, gender, race, or any other form of social identity deemed relevant) in national-level Associations, and from nations to ensure broad representation in international Associations. As before, the model includes three sorts of Associations on both levels. The first considers the universal₁ social needs falling on the national or international levels (for example, infrastructure serving the national or international community as a whole, including energy, information and transportation networks, networks). A second pair of Associations assess how well universal₂ needs have been addressed within the regions of the given nation, or within the nations sharing a commitment to the socialist project, along with the future paths that could be taken to improve need provision within the nation and across the

socialist world. The international Association concerned with universal₂ needs must also consider whether the present list of the fundamental basic needs that every individual must have adequately addressed for their 'full and free development' remains appropriate; the corresponding; the corresponding national-level Association must examine whether the list holding throughout the socialist world should be strengthened in the national community, recognising that devoting more resources to universal₂ needs will leave fewer to address needs in the other categories. It may also lead to more time spent in the 'realm of necessity' than would otherwise be the case. The third type of Community Association considers which particular needs for particular goods and services are so widely shared within the nation or across the globe that producing them on the national or international level is warranted when there are Production Collectives with the requisite capabilities.

The work of each Association includes studying the available quantitative and qualitative data, directing new studies to acquire additional relevant data, and hearing testimony from theorists and practitioners in relevant areas, extensive deliberation among their members, and related activities.

After determining general priorities for each particular category of needs the Community Associations then meet collectively (or perhaps send representatives to a smaller group) to determine priorities across the three categories on the national and international levels. As before, they are asked to formulate what they regard as the two strongest alternative options. These alternatives are then examined by the national Democratic Assembly and an international Democratic Assembly, which after deliberation can accept the Community Associations' options, modify one or the other in ways the Associations agree to, or propose a third alternative. As is the case on regional and local levels, if Community Activist Groups are able to obtain signatures from a significant proportion (say, twenty percent) of the relevant community (here the national- or international community) in support of a proposal, that proposal would be added to the list of alternatives as well. These alternatives are then discussed over the course of a series of in-person and virtual public forums where regional and local priorities are discussed, leading to referendums where the selection of general priorities for social production on the national and international levels can be determined through ranked voting.

As noted in the discussion of other levels in the proposed model of socialism, there are limits to how much time and effort people will freely choose to devote to political issues. And there are limits to the number of issues even those willing to make extensive time and effort commitments can become adequately informed about. A model of socialism needs to incorporate direct participatory democracy at crucial times, while not making excessive demands on the

time and effort of citizens at large. Combining voluntary Community Activist Groups, representative bodies selected by lot (Community Associations) and elected representative bodies (Democratic Assemblies) with the direct participation of public forums and referendums balances the competing considerations. The balance may not be perfect. (Nothing is.) But it is far superior to capitalist democracy and the neo-imperialist global governance of the capitalist world system.

Once the priorities for production on the national and international levels have been set, Production Collectives already operating on one or the other of those levels must decide whether they wish to continue doing so. Established Collectives whose production has addressed regional or even local needs can consider whether they wish to expand. New Collectives emerging from research parks have the option of planning to produce on an extensive scale from the start. If a collective decision to produce on these higher levels is made, requests for social investment on national or international levels must be formulated. Analogously to those on lower levels, these proposals include both the general sorts and/or specific products the Production Collectives are capable of producing that would address social needs widely shared on the national or international levels, and a reasonable estimate of the full social (including environmental costs) of their production, including the costs of obtaining necessary inputs from other Collectives and the income members would receive in the coming period.

The national Sector Agencies discussed in previous chapters then provide a comparative assessment of the past performance and future prospects of Collectives requesting funding for national-level production relative to other national-level producers in the given sector. These Agencies also provide critical feedback regarding Collectives' estimate of their costs of production in the coming period, which Collectives are encouraged to take into account in revisions of funding requests. An International Sector Agency must be formed in order to provide an analogous assessment of Collectives requesting funding for international production, its members randomly selected from candidates with experience in national Sector Agencies nominated by their co-workers. Besides considering the past record (when available) and future promise of a Collective's effectiveness at producing for social needs, and the reasonableness of its estimate of its costs of production, Sector Agencies must take into account any economies of scale from expanded production, the learning-by-doing that could result, whether potential suppliers are in place, and any other aspect of production suggesting that units of production operating on a national or international scale are likely to address social needs more effectively than dispersed units of production operating on more restricted scales. As on local

and regional levels, on both the national and international level the estimates of environmental costs must take into account the findings of independent Research Centres specialising in environmental sciences.

National and International Producer Reviews Board consist of randomly selected workers nominated by co-workers in Collectives operating in the given nation or across the globe, respectively. These Boards assess Collectives and their proposals in specific national or international terms, considering, for example, whether the available infrastructure and innovation system are adequate to support what a Collective requesting funding for national or international production hopes to accomplish, the extent facilities for education and training members in relevant fields are available, and so on.

National- and international-level Social Investment Centres must then allocate investment funds enabling Worker Collectives to operate on one or the other level, taking into account the democratically determined needs on the relevant level, the specific and general commitments to address needs made by the Production Collectives requesting funding, and the evaluations of Sector Agencies and Producer Review Boards regarding the capabilities of the Production Collectives. As was the case for investment decisions on the regional and local levels, national and international Social Investment Centres must provide a written public report on each investment request, stating explicitly the major reasons leading them to grant or withhold funding.

The membership of international- and national-level Social Investment Centres is again crucial. On this level too, a wide variety of perspectives need to be included, as well as extensive relevant experience. Members could be randomly selected from a list of candidates who 1) have experience serving in lower-level Social Investment Centres, Community Associations, Producer Review Boards, Sector Agencies, Research Centres, and Democratic Assemblies, and 2) have been nominated for this crucial position by co-workers who have concrete evidence of their competence and disposition. As before, ten-year staggered terms seem appropriate.

The Social Investment Centres of each national community receive in aggregate a share of total global investment proportional to the size of the nation's population. Their investments in aggregate must result in the use of no more than their per capita share of the human environmental footprint compatible with planetary states allowing human flourishing.⁶ The funds allotted by Social Investment Centres for international production can be conceptu-

6 One consequence of an international socialist community adhering to the two solidarity constraints is that the relative size of a nation's territory or population does not matter – small countries with few people, large countries with many, and all other possible combinations, all

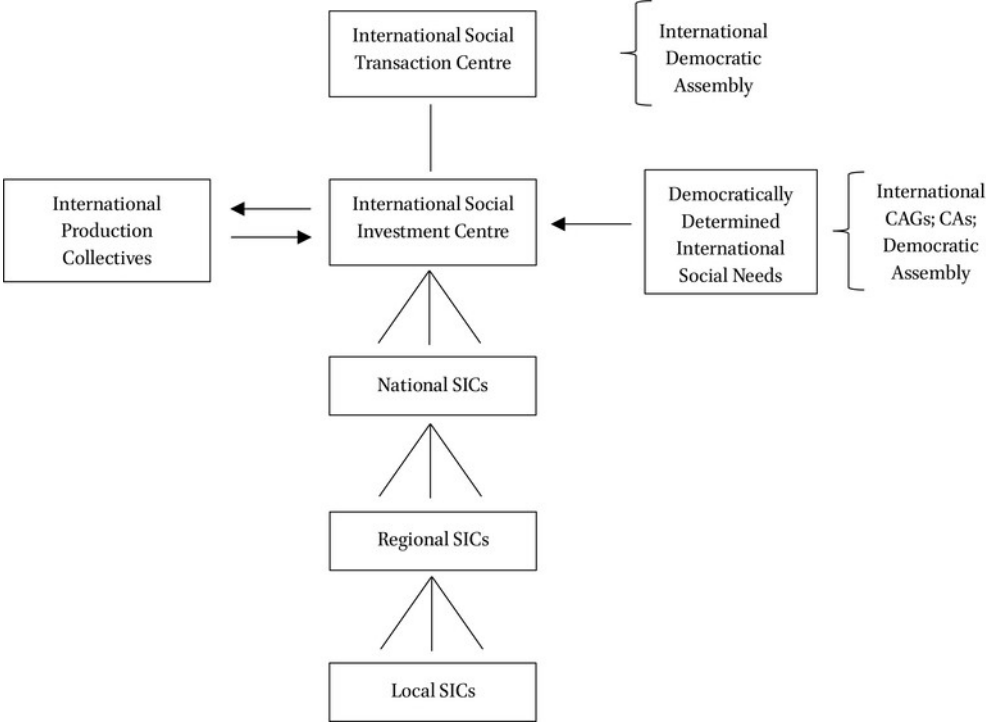


FIGURE 11 The system of Social Investment Centres and the Social Transaction Centre

alised as the residue remaining after funds for national, regional, and local production have been deducted from the aggregate for the globe. Or it could be seen as an initial allocation with the remainder divided among national, regional, and local investments. The environment footprint from production on the international level can be analogously conceptualised as either limited to what would be compatible with acceptable planetary states after the footprints from production and use on national, regional, and local levels have been taken into account, or as an initial contribution to the aggregate acceptable footprint that then determines how much remains for national, regional, and local production and use. (See Figure 11.)

The amount of horizontal and vertical coordination among Social Investment Centres required by this model of republican socialism obviously is greatly increased when the national and international levels are added. As was

receive no more than their per capita share of investment funds and an aggregate acceptable environmental footprint.

the case before, horizontal coordination among Social Investment Centres on the same level can be accomplished through the two-step process of investments at the local level outlined in Chapter 6, with an initial period where allocations are first made separately (but with instantaneous knowledge about the decisions of the others), and then made sequentially, with each taking a turn at filling gaps in areas of needed investment.

In principle, it could be argued that the requisite vertical coordination could occur when investments on local, regional, national, and international levels were made at the same time in the same process. In the first step, each international, national, regional, and local Social Investment Centre simply funds the strongest proposals, taking priorities of their communities into account as well as the solidarity constraints. At this stage the local, regional, national, and international investments would be coordinated through information networks instantaneously informing each Centre of the allocations made by every other Centre, allowing each Centre to be aware of general categories and specific cases of social needs remaining unaddressed at a given moment, as well as potential imbalances between the funding of suppliers and the funding of potential users of those supplies, taking this information into account in their decision-making. In the second step each Centre would make allocations sequentially, allowing the highest priority inadequately addressed needs and potential imbalances to be addressed step-by-step in a more ordered fashion.

Can we be reasonably confident that an initial stage of simultaneous allocations employing advanced information technologies to informally coordinate investment decisions, followed by a phase of sequential allocations by Social Investment Centres when horizontal (among local Centres) and vertical (between local and regional ones) coordination is more formally organised, would adequately manage the added complexity? 'Adequately' here is not a synonym for 'perfectly'. It is enough if the social forms of coordination further 'the full and free development of every individual' better than the profit-driven speculations of capitalist investors. Do they?

It was not clear that they do on the level of regional investment. It is much less clear that they do here. Whatever other problems markets might have, national and international markets fairly easily co-exist with regional and local markets. In contrast, even with the most advanced information technologies and the greatest efforts to maintain formal and informal connection among Investment Centres, simultaneous investments on all levels would almost surely overburden attempts at coordination. While corrections to any indicative plan will always have to be made, the number of corrections that would likely be required would almost surely overburden the system of Social

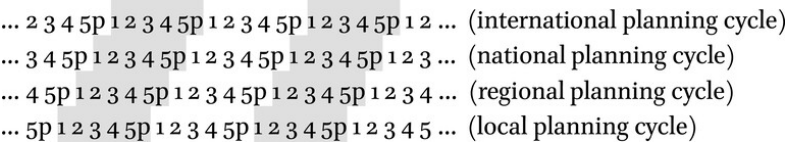


FIGURE 12 Planning cycles

Investment Centres and the institutions and organisations of socialist self-governance that aid, monitor, or oversee the operation of that system. The profound difficulties that would likely arise would most likely undermine the claim that this version of socialism would be feasible.

Fortunately, the alternative approach defended in Chapter 8 can be extended. Just as the five-year planning cycle of regional investment does not need to coincide with the cycle of local investment, the planning periods of national and international investments can each be separate from the others while overlapping with them. Consider, for example, Figure 12. Every column represents a single year. But any given year falls on a different place in the five-year planning cycles of the various levels. The four five-year cycles do not coincide but rather overlap. This allows decisions made by Social Investment Centres on any level to take into account the decisions on all other levels still in effect.

Take first entry in the lowest row. The '5' represents the fifth year of a planning cycle on the local level. A 'p' is attached to show that the planning for the next cycle will be completed in the course of this year, making the following year the first year of a new local-level cycle.⁷ In this example Year 1 of the local cycle coincides with the fifth year of the regional cycle, when the indicative planning for that level is undertaken, and so on for the national and international levels. This arrangement would make it far easier for there to be vertical coordination of investment decisions among the different levels, although it would not eliminate the need to make adjustments within and across planning periods. If something along these lines were adopted, public participation in the planning process on all four levels could also be instituted without placing excessive burdens of time or energy on socialist civil society in any given year. That would surely not be the case if public forums and referendums were required for each level in the same year.

7 Perhaps in the Community Associations and Democratic Assembly could work out their proposals for social needs and priorities among them by the end of year four, followed by public forums, referendums (and revised proposals if needed) in year five.

No model of republican socialism should be based on the ludicrous assumption that all agents – or any agent, for that matter – possesses perfect information about all possible future needs, all possible future productive capabilities, all possible future events, and so on, along with the probabilities associated with every possibility. The goal is instead to live in a social world where allocations of resources are based on what we have most reason to believe will best further the full and free development of every individual. The process of overlapping cycles of social investment on international, national, regional, and local levels outlined here would meet this goal far better than any market system, where allocations are based upon profit expectations modified to a limited and contingent degree by external political interventions. The standard of comparison is not a perfect world of fantasy. It is the capitalist world market, with all the radical economic insecurity, political irrationality, and human deprivation and lost potential, that inevitably result from dissociated sociality, uneven development, the neo-imperialism of the capitalist inter-state system, and the risk of species ecocide imposed by a global order subject to the valorisation imperative. The claim that the version of socialism presented here would be a clear normative advance over all *that* is fully warranted.

Once funding has been provided, the members of Production Collectives producing to address social needs on the national or international level have the autonomy to decide (either directly or through elected representatives serving on Worker Councils or as managers) the specific products they will produce, the inputs required to produce them, the suppliers from which those inputs will be obtained, the social organisation of the production process, and so on, mobilising their collective creative intelligence.

After output has been produced, the same acquisition processes considered on the regional and local levels take place. Collectives obtain needed inputs from suppliers at their cost prices (units of account representing the direct and indirect labour time and the environmental impact of production). In the case of universal₁ goods, the national and international Democratic Assemblies establish national and international Community Agencies, respectively, charged with obtaining a particular category of such goods (e.g. a national or international system of communication satellites). The international Social Transaction Centre provides these Agencies with income created *ex nihilo* by writing a number in their accounts, used to acquire what is needed from a Production Collective the Agency selects. The acquisition of universal₂ goods is handled the same way when they are distributed as free public goods by an Agency established for that purpose. In other cases, they are treated like particular goods, acquired with income individuals, households, or groups

receive from membership in a Worker Collective, contributions of other forms of socially necessary labour, the social bequest, or a prize for a successful commons-based peer production projects.

It is now time to consider the important role of Social Transaction Centres in this model of republican socialism.

3 The Social Transaction Centre

Once production for social needs on the international level has been introduced, the quasi-money that plays a central role in local, regional, and national production in the model can be explicitly recognised as a form of world money (or ‘money’, if preferred). It is not a national currency used in international transactions. As an international unit of account it is somewhat analogous to the Special Drawing Rights issued by the International Monetary Funds. It is dissimilar to SDRs, however, in that it is not a basket of national currencies. It *replaces* national currencies. And it plays a far bigger role in socialism than SDRs play in the present global order, where maintaining the dollar (a national currency) as the most fundamental form of world money has been at the very top of the list of priorities of the world’s hegemonic power.

A special international agency, termed here the international **Social Transaction Centre**, creates the quasi-money deemed necessary for global production for social needs *ex nihilo* by simply writing numbers in the accounts of its national branches as well as its own account. It is simple enough to say in very general terms what determines the aggregate amount of ‘money’ that needs to be created in this manner in a given period: the amount needed for producing and acquiring goods that effectively address social needs in global socialism to the greatest feasible degree consistent with maintaining planetary conditions suited to human flourishing. The relative share allocated to each national branch of the Social Transaction Centre is determined by the first solidarity constraint (in other words, it is proportional to population size). The amount allocated to its own account is determined by funding needs of the institutions of socialist self-governance on the international level (the international Democratic Assembly, international Social Investment Centres funding Production Collectives operating on an international level, various international Agencies, the international innovation system, and so on).

Determining the specific aggregate amount that needs to be created cannot be done with precision, given the irreducible uncertainties of social life. The most we can hope for – and all that is needed – is to select some amount

out of the range of figures that could be reasonably argued to be adequate to the requirements. Discovering this range will undoubtedly require processing a considerable amount of data as well as regular adjustments in an ongoing trial and error process. This may sound a daunting task. From a technical standpoint, however it is a much more straightforward task than that assigned to Central Banks in capitalism. They are asked to adjust monetary flows to the needs of the capitalist economy through the interest rates charged banks, the purchase and sale of bonds, and so on, while private banks have the social power to create credit money and cease its creation at their private discretion, based on their assessment of their private interest in profits. Private banks need not lend what they have borrowed (and won't, if they have concerns for their own liquidity), and when they do lend credit does not necessarily flow to further the long-term prospects of capital accumulation (it won't, if profits promise to be higher from short-term investments). Today an immense shadow banking system outside the control of Central Banks has increasing weight in the global financial system, with even less social oversight over its activities than the official banking system. In republican socialism, in contrast, investment allocations will be invested to address democratically determined needs, taking social costs into account. It is not at all obvious that the latter task requires more processing of data, involves more imprecision, or demands more adjustments than the activities of Central Banks in capitalism, forced to accommodate money creation by bank and shadow banks, rescue the financial sector from the consequences of its excesses, restrict real wages in the name of fighting inflation, and help manage the debt of sovereign states, corporations, and households so that defaults and bankruptcies do not reach a scale where global capitalism is threatened with collapse.

The importance of a single source of money across the international socialist community cannot be overstated. With different national currencies it would be difficult if not impossible to impose the first solidarity constraint across the socialist world. As soon as one country allowed money to be created for social investment beyond what others thought was its fair share, most likely using it in ways that imposed environmental costs beyond its fair share, others, not wanting to be 'suckers', would be tempted to follow. Under these circumstances 'the full and free development of every individual' would be an empty ideal, a mere ought. Talk of global justice and environmental responsibility would be empty verbiage. International conflicts would eventually arise for reasons all too reminiscent of the reasons underlying international conflicts in capitalism. The rules of a game should not undermine the playing of the game; the rules of socialism should not have the foreseeable effect of undermining the socialist project.

When every nation (every region, every locality) is guaranteed its per capita share of investment funds and its per capita share of the total environmental footprint maintaining planetary conditions suitable for human flourishing, international solidarity is not a vague sentimental feeling of good will towards others. It has a material actuality in concrete social life. To join the socialist international alliance is to affirm the reasonableness of the two solidarity constraints as the best way to organise our life together on the planet we share. A necessary condition of the possibility of international socialism is a world currency providing the same unit of account and means of tracking transactions throughout the socialist world.⁸

Another great benefit of this dimension of the socialist model is that the global imbalances between surplus regions of the world market and deficit regions that have caused immense instability in global capitalism are ruled out from the start.⁹

After each national branch of the Social Transaction Centre receives its proportional share of the global aggregate of funds, it retains in own account an amount determined by funding needs of the institutions of social production and socialist self-governance on the national level. The remainder is distributed to regional branches of the Social Transaction Centre, each receiving its per capita share. The regional branches retain a percentage of funds for the institutions of social production and socialist self-governance on the regional level, with the remainder going to local branches of the Transaction Centre in proportion to the population of the localities. On each level the branches, following the instructions of the relevant Democratic Assembly, creates accounting units in the accounts of the Social Investment Centres, Community Agencies, Research Centres, and so on, of that level.

All transactions within a given locality are accompanied by additions and subtractions to the accounts social agents and social organisations have with

8 Richard Westra proposes that every locality has its own Community Currency for its local economic activities, separated by a firewall from a state currency for transactions between the state production sector and community economies. In my view, this would tend to lead to a fragmentation of more or less isolated local communities. The relationship between local production and state production would be external rather than internally integrated, and the same would hold for the relationship between local and state currency. Similarly, when each socialist nation has its own currency, there will be external relationships of competition between socialist regions paralleling the market principle of capital, as Westra himself notes (2018, Chapter 5).

9 The systematic tendency to global imbalances is also dissolved by the extension of the intellectual commons to include all scientific-technological knowledge, discussed below.

the local branch of the Social Transaction Centre. Similarly, all regional transactions are accompanied by additions and subtractions to the accounts social organisations and social agents operating on the regional level have with the regional branch of the Social Transaction Centres. National transactions are tracked by additions and subtractions to accounts kept in the national branch and, finally, international transactions are processed in accounts kept by the international Transaction Centre itself. Each higher-level in the Social Transaction system also records and monitors the transactions occurring on levels 'below' it. Information about all transactions is publicly available, with information about acquisitions of personal goods by individuals and associations of individuals encrypted so that only information about the aggregate quantities involved, and not specific persons or groups, is visible. While anyone can learn just about anything about flows of products and income, the Social Transaction Centre and its branches are the sites officially mandated to monitor and record transactions in specific territories, providing the data directly to Community Activist Groups, Democratic Assemblies, Community Associations, Production Collectives, Research Centres and so on. Different groups can then search for patterns that may enable inadequately addressed present needs to be detected and likely future needs to be projected.

4 A Note on the Implications of the First Solidarity Constraint on the International Level

In Chapter 4, Section 5.1 the following statement was affirmed as an important historical lesson of emancipatory struggles:

* No individual's development should be systematically hampered by the contingent fact of living in one place rather than another. Serious disparities in life chances must not result from geographical disparities in flows of investment.

A corresponding core commitment of the socialist project was then proposed for inclusion in a socialist constitution:

* Every specific political territory in socialism (local, regional, and national) receives a share of social investment funds directly proportional to the size of its population.

The model anticipates a republican socialism that has been established internationally in a significant segment of the world. It does not concern the transitional period in which it is being established. The model leaves open an asymmetrical distribution of investment in socialist countries during the immediate period of transition. But it does not include an extension of this asymmetry afterwards. Those committed to the socialist project might question the application across borders of this first solidarity constraint from two quite different points of view.

1. It could be argued that an international order subject to this constraint does not adequately acknowledge the need for restitution for the great harms inflicted by capitalist predation in so many parts of the globe. Why should countries privileged for centuries by imperialism and neo-imperialism receive the same proportional share of investment funds as those that suffered the costs of imperialism and neo-imperialism? Doesn't international solidarity demand that the former receive less than an equal (per capita) share and the latter more in socialism, if not forever, then at least for the indefinite future?

In a sense, global restitution is built into the model to some extent. The abolition of capitalist units of production, distribution and finance, combined with the loss of income and wealth of investors and top managers of capitalist firms, considerably improves the standing of the Global South relative to the Global North, taking those terms as rough proxies for nations harmed by or benefitting from imperialism and neo-imperialism.¹⁰ It is also the case that abolishing trade secrets and patents will set off the most extensive transfer of knowledge at the scientific-technological frontier in human history, provided freely to recipients. This too improves the relative standing of the Global South and can be interpreted as a necessary form of reparation for the exploitative and oppressive structures and practices that have enabled the latter to maintain a near-monopoly on formalised knowledge with commercial applications for so long.

Should even more losses and even more transfers be institutionalised indefinitely in socialism to compensate for the horrors implicated by imperialist and neo-imperialist appropriations and acts of violence on a vast global scale over centuries? There are reasons to hesitate before answering.

One consideration is pragmatic. While there are no systematic tendencies in the model generating social agents with a strong material interest in restoring

10 Too rough, perhaps. (In what sense is Australia part of the 'Global North'?)

capitalism, that does not rule out such agents from appearing. The openness to different voices in republican socialism provides space for them to have their say. Those calling for a return to capitalist private property can be expected to complain voraciously that the socialisation of the means of production and the abolishment of intellectual property rights count as the greatest acts of theft in human history. This claim can rightly be dismissed as ideological nonsense. Unfortunately, that does not imply it will lack all rhetorical force. If a lower than average rate of funding per capita persisted indefinitely in a national community, those favouring a return to capitalism would be given another rhetorical weapon. There is no reason to assume it would never be effective.

Whatever benefits privileged individuals and groups may have enjoyed in the countries that had been part of the 'core' of global capitalism, it is also the case that most of those living there were exploited and oppressed themselves. Most of those living after socialism was established would consider the latter the more salient fact. If, however, there were significantly below average funds per capita for an indefinitely extended period of time in those nations, some, at least, would be likely to regard that as unfair. More people are more likely to be more favourably disposed to ideological nonsense than they might otherwise be, making the socialist project more vulnerable.

The case for lasting reverse global disparities in investment flows as restitution for the disparities of the past would be much stronger if the after-effects of imperialism/neo-imperialism enabled those living in areas that had been at the centre of global capitalism to appropriate greater social wealth in socialism too. But that is ruled out by the model. The determinations of flows of income for individual and social consumption are uniform throughout the global social order.

None of these considerations is decisive. The idea that international solidarity requires indefinite restitution retains intuitive plausibility. But the redress built into republican socialism should not be underestimated.

2. The first solidarity constraint can also be criticised from a quite different standpoint. In international socialism there will be nations with quite different levels of productivity when it is first established and for an indefinite period after. That period of time will be extended every time a low productivity nation joins the federation. A case can be made that when this is taken into account applying the first solidarity constraint on the international level would result in too little investment in the (high productivity) nations that had been part of capitalism's 'core', rather than too much as in the first objection.¹¹

11 Versions of this challenging objection were forcefully made by two reviewers invited by the publisher to evaluate an earlier draft of this book.

If a low-productivity nation receives the same (per capita) share of investment funds as a high-productivity area, wouldn't the former lack the productive capacity to absorb the investment? Wouldn't the result of pumping money into the economy of the former be a systematic tendency to inflation? Suppose that in order to avoid that result while maintaining the first solidarity constraint, investment rates in high-productivity nation were lowered to what a low-productivity nation joining the federation could employ without setting off inflation. Wouldn't that significantly lower output and living standards in the high productivity nations? Or suppose work hours were increased in the low productivity nations in order to increase output. (If inflation is a matter of too much money chasing too few goods, then increasing the output of goods could avoid it.) Would work times in high productivity regions have to increase to maintain a global egalitarianism of work conditions? If so, inflicting lower output, lower living standards, or increased worktimes seems both inconsistent with the socialist project and politically dangerous, leaving that project more prone to lose support. All these problems could be avoided if the socialism allowed investment funds to correspond to productive capacity. But that is ruled out by the first solidarity constraint.

To some extent, at least, these worries are misguided. It true that after centuries of systematic uneven development in the capitalist world market there will be an extended period when some nations in the international socialist federation will not be able to efficiently devote their full share of investment funds to production for immediate consumption. Adequate infrastructures are not in place; workforces with the requisite skills are not available. *But the model of republican socialism does not mandate that investment funds are only devoted to the production of goods for immediate consumption.*

The application of the first solidarity constraint is flexible and open-ended. Granting every region in the socialist world the same per capita share of investment funds does not imply that these funds must be used in the same way in all places and all times. In low-productivity nations a higher proportion of its per capita share of funds need to be devoted to infrastructure projects, the education and training of the workforce, and so on, and a lower proportion to production, than in high productivity places. The investments needed to catch up to the global frontier in infrastructure, education, and training do not necessarily tend to involve lower levels of employment than in territories that do not have to direct as much investment in those directions. Those employed in these endeavours receive on average the same income as members of Collectives elsewhere. The model allows income to be spent on products produced in other localities, other regions, other nations than one's place of residence. This implies that those living in places where productivity levels

are lower need not have less individual and social consumption. A higher percentage of what they consume will simply be produced in other places until they catch up. Throughout this process the socialist model does not demand that investment levels and living standards must decline in high productivity areas, or that time spent in labour in the 'realm of necessity' there must increase.

It is also important to recognise that *an equal amount of time in the workplace is not a determination of the model*. The relevant determination is that the international Democratic Assembly fixes a high but reasonable standard for work conditions across the globe that national-level Assemblies are free to strengthen in their territory but cannot weaken. The model, in other words, allows the length of time commitment for full time membership in Worker Collectives across the globe to be set high enough for regions with relatively low productivity to devote the additional worktime required to catch up more quickly, with a lower time commitment remaining in high productivity territories, so long as the former remains within acceptable bounds. If a somewhat slower rate of catching-up is acceptable in previously disadvantaged places and preferred to longer workweeks, that is allowed by the model as well. Either way, international solidarity does not demand that workweeks be increased in high productivity places every time a low productivity area with a longer workweek joins the international socialist federation.

The process of catching up will not be instantaneous. But it is likely to be relatively quick, once producers from other places can no longer benefit from unequal development due to branding, other intellectual property rights, extensive direct and indirect corporate support bestowed by imperialist/neo-imperialist states, and all the other barriers impeding catching-up imposed by the property and production relations of capitalism and the overt and latent violence of capitalist states.

Nonetheless, there will still be an extended period when aggregate output within the international socialist federation could be increased by allowing a higher rate of investment in high productivity nations.

The case for a model where the first solidarity constraint holds on the international level does not depend on the argument for long-term reparations being false. Nor does it depend on the argument for directing higher rates of investment funds to higher productivity nations being refuted. The former implies greater investment funding in lower-productivity territories, the latter implies the opposite. There is a moment of truth in both positions, ruling out a one-sided acceptance of either. Providing a rate of investment in nations that had been at the core of global capitalism higher than what the first objection demands acknowledges the moment of truth in the second. Providing a rate of

investment in nations that had been at the core of the capitalist world system lower than what the second objection demands acknowledges the moment of truth in the first.

The crucial matter is that comparable levels of productive capacity, labour productivity, and so on, cannot be maintained across borders without comparable rates of investment per capita. This justifies extending the special constitutional status of the first solidarity constraint in republican socialism to the international level.

5 National and International Democratic Assemblies

5.1 *Preliminary Remarks*

The need for Democratic Assemblies on the national and international level was discussed briefly in the first section of this chapter. It is now time to consider these Assemblies at greater length.

Before beginning, however, we should remind ourselves just how oppressive the state has been in human history, the capitalist state by no means excepted. There is reason to fear that a world state with yet greater concentrated powers would be a yet more alien force over individuals and their local communities.

Marx's political philosophy is a philosophy of immanence. He rejects the supposed ontologically transcendent powers of an alien state above society as vehemently as the supposed ontologically transcendent power of an alien heaven ruling over the earth. Insofar as the model of socialism advocated here includes centralised authorities on both the national and international levels, does it betray this commitment to immanence?

If systematic alienation is to be avoided, citizens of national and international communities must collectively determine their collective life. This does not mean everyone must make national and international concerns the centre of their lives, or that all national- and international-level issues are always best decided by referendums after public discussion. The goal is to maintain an appropriate balance between the inclusion of all relevant perspectives in deliberation, the substantive capacity of all social individuals to stand as equals in social life, the accountability of all those exercising political authority to those over whom the authority is exercised, and the need for those making decisions to devote the time required to be adequately informed of the available evidence and to reflect on alternative perspectives and proposals. Becoming informed, deliberating, and deciding on international- and national-level policies require considerable amount of time. An acceptable model of socialism must offer

everyone who wishes to devote that time the chance to do so. But it must also leave social individuals with the freedom to decide to devote less of their time to these tasks and more to other dimensions of their complex and heterogeneous selves.

Republican socialism affirms the legitimacy of representative democracy, not as a form of (thinly) disguised class rule, but as an appropriate political form for furthering the freedom and well-being of social individuals when time is limited, and legitimate ways of life vary. In other words, the same general considerations underlying the role of regional and local Democratic Assemblies justify including a representative Democratic Assembly on the national and international levels in the model of socialism presented here.

The framework for selecting members of local and regional Assemblies can be scaled up again. For national Assemblies, half the membership could be chosen in regional elections and half in national ones. For the international Assembly, half could be determined in national elections, and half in an international election. In both cases the number of representatives granted to a particular territory must be proportionate to its population size. Ranked voting can be used throughout.

Political democracy in capitalism is limited and perverted by the oligarchy at capitalism's social core and the state's subjection to the valorisation imperative. Still, there are lessons to be learned from capitalist democracy, as limited and distorted as it is. One is that parliamentary systems with Prime Ministers elected by parliament tend to be less prone to authoritarianism than presidential systems. It seems advisable, then, to have the head of the national and international Assemblies elected by the members of those representative bodies.

5.2 *Tasks of International and National Democratic Assemblies*

As we have seen, the international Social Transaction Centre creates the socialist quasi-money that is then distributed throughout the socialist world. It is important that the members of this Centre have background knowledge, training, and experience in matters relevant to its mission. It is no less important that this Social Transaction Centre not wield unaccountable power analogous to that of the International Monetary Fund today. But it is also important that the role of specialised knowledge, training, and experience is acknowledged and mobilised. The two considerations are combined when the Social Transaction Centre makes an initial proposal regarding the total aggregate of monetary funds to be created and allocated, with the international Democratic Assembly having to the power to either ratify the proposal of the Transaction Centre or suggest modifications. Reasons for believing a modification would better enable productive resources to be mobilised and socialist self-

governance maintained must be publicly expressed and defended, with the members of the international Social Transaction Centre having a right to respond. We can expect occasions when a significant modification occurs to be rare. If a modification by representatives worsens the result, those represented – that is, the members of the international socialist community – will be harmed, giving the latter a strong incentive to elect new representatives to correct the mistake.

The international Democratic Assembly must also affirm the total aggregate environmental footprint to be allocated proportionally to nations, regions, and localities by population. Here too the task of proposing the figure is assigned elsewhere, in this case to the system of Research Centres specialising in environmental sciences. The members of these Research Centres have the specialised background knowledge, training, and experience to determine a reasonable estimate of the largest aggregate environmental footprint compatible with planetary states fostering human flourishing, based on the most advanced scientific knowledge of the day. The international Assembly must again publicly express and defend any adjustments to the environmental Research Centres' proposal and invite their response. We can again expect the occasions when the international Assembly modifies the Centres' proposal to be relatively rare. Environmentalist Activist Groups will be wary of any unwarranted increase in the estimate of the acceptable environmental footprint. They will mobilise public pressure against such an increase, backed up by the socialist Judicial System. (Actualising the right to a liveable environment is absolutely central to the socialist project.)

Besides having the ultimate power to confirm the two aggregate amounts in the socialist world system, the international Democratic Assembly has the power to determine the portions devoted to activities on the international level. In specific, it has the power to determine the share of investment funds devoted to international-level production, along with its share of the aggregate environmental footprint compatible with planetary states fostering human flourishing. Is there reason to fear its members will use their centralised power to appropriate a disproportionate share of investment funds or the allowed environmental footprint for their own priorities? What would stop them from allocating so much to their own favourite projects that the amounts left for production on the national, regional, and local levels are below what is acceptable? Similarly, what would stop members of national-level Democratic Assemblies from allocating so many investment funds and such a high percentage of the acceptable environmental footprint of human activities that regions and localities within the given nation are marginalised?¹²

12 A major problem in so-called state socialism of the twentieth century was that the prior-

These concerns are misplaced. Reasons for this assertion have been suggested in the course of this book. They are worth reviewing, given the importance of the issue.

* Members of a higher-level body are elected by, accountable to, and revokable by, members of the lower-level communities they represent. If they pursue policies lacking the support of those they represent, they will tend to be removed. This tendency will hold with far greater force than it does in capitalist democracy, where concentrated economic power can often be translated into 'political' (in an illegitimately narrow sense of the term) power, allowing representatives to pursue policies a majority of their constituents do not want with impunity so long as they retain the support of wealthy backers.

* The determination of priorities on the higher levels is not solely made by international or national Democratic Assemblies. Community Activist Groups, Community Associations, Social Investment Centres, public deliberations, and referendums all play essential roles as well.

* The solidarity constraints prevent the members of a higher-order Democratic Assembly from favouring some lower-level nations, regions, or localities over others. There is no material basis for a coalition between those holding positions of authority on an international level and officials of a nation receiving special privileges in return for loyalty to the former. There is in contrast a material basis for a coalition of socialist nations against an international body that starves them of resources.

* The socialist Judicial System is charged with ensuring that the commitments found in the socialist constitution are carried out in practice. That would not be the case if the resources devoted to higher-level concerns left nations, or regions, or localities impoverished. It would also not be the case if the principle of subsidiarity were infringed, leaving social agents on lower levels with little to no control over decisions that primarily affect them.

ities of leading members of the nomenklatura determined the priorities of investment, leaving important categories of social needs inadequately addressed. For all the rhetoric of a being a 'workers' state', the state claimed a transcendence over society no less than the capitalist state. While this claim was an illusion from the ontological point of view, it was an illusion with material force behind it.

There is no one correct allocation of funds to the different levels. As circumstances change it will be appropriate for the international, national, or regional, or local levels to sometimes have a greater and sometimes a lesser share. Republican socialism aims at determining appropriate shares in a given context, with the flexibility to make changes as circumstances change and to correct any errors relatively quickly. This requires social forms that prevent the rise of socially created powers that then turn around and operate as transcendent powers above the society that generates them. The model of socialism developed here consists of such social forms.

Returning to a survey of the tasks of the international Democratic Assembly we can add the following.

The international Assembly must cooperate with Research Centres specialising in environmental sciences to verify that the second solidarity constraint is adhered to within and across national territories, just as national and regional Assemblies must verify that they are implemented on regional and local levels, respectively.

The principle of subsidiarity implies that concrete issues regarding the provision of nutrition, health, housing, education, and other basic goods addressing to universal₂ needs, be generally left to local communities, where those who having these needs participate directly in deliberations and decisions regarding how and by whom they are provided. The principle of solidarity, however, implies that no one should be significantly disadvantaged in life prospects due to the accident of living in one locality rather than another. A proper balance of these two requirements must be maintained. This can be accomplished when the international Assembly fixes relatively high, but reasonable, standards regarding basic need provision that every socialist nation must meet, monitors national practices to ensure these standards are in fact met, and intervenes when a particular nation falls short for any reason. (National-level Democratic Assembly have analogous responsibilities regarding the provision of basic needs in regions within the national territory.)

The members of the international Democratic Assembly are charged with reviewing the socialist constitution at regular intervals, soliciting proposals for revisions, deletions, and additions from socialist civil society and making changes as warranted in the light of historical experience and learning. (The suggestion in Chapter 4 was a review every ten years). This includes the task of re-examining the constitutional guarantee of access to basic universal₂ goods in a new historical context. The minimal standards of nutrition, housing, medical care, education, and so on, that must be provided to every individual living within socialism may need to be raised in the light of scientific-technological advances, leaving Assemblies on other levels free to determine even higher

standards of regulation and social provision should they wish. Other goods may be appropriately added if and when they are recognised as necessary for standing as an equal in social life in the given social circumstances (a computer and access to the internet, for example, have become requirements for a flourishing life today).

While time for relationships with family, friends, and acquaintances, for participation in the life of the communities one is a member of, for projects of one's own choosing, and so on, is a fundamental universal₂ need, it is significant enough to discuss separately. The international Democratic Assembly must determine the maximum amount of time individuals will be asked to devote to socially necessary labour in the formal organisations of socialism. In capitalism, reductions in the legally allowed workday have only been obtained through massive worker struggles, and all too often have been hollow in the face of forced overtime or a workplace culture where those who do not 'voluntarily' devote excessive time to the unit of capital employing them are denied prospects of advancement and face intensified employment insecurity. In socialism, in sharp contrast, the international Democratic Assembly can be expected to ensure that reductions in the workday closely track advances in labour productivity.¹³

The international Democratic Assembly also must in addition the minimal share of investment that must be devoted to particular goods aiding individuals and groups to live the particular sorts of lives they have freely chosen to lead. Here again it must monitor different nations to verify that this minimum is being provided. And here too national and regional Assemblies have an analogous duty vis-à-vis regions and localities, respectively.

The international Democratic Assembly must also fix the percentage of national investment devoted to the Research Centres that form the heart of national and regional innovation systems. The ruling purpose of the international framework of republican socialism is the 'full and free development of every individual' within the international framework no less than it is on the national level. When some territories have units of production operating much closer to the scientific-technological frontier than others, this egalitarianism (*every individual's full and free development matters*) is effectively ruled out.

13 In the US, the Fair Labor Standards Act was amended to limit the working week to 40 hours in 1940. Anyone somehow doubting that the US is permeated by class power is invited to consider the advances in labour productivity in the intervening decades while the 40-hour week has remained the (often exceeded) norm.

A further task of the international Democratic Assembly is to determine the international regulatory regime regarding consumer protections, workplace safety, disclosures of information about products, anti-discrimination measures, and so on. There is a place in the socialist model for an intermediate space between the abstract constitutional principles regarding such matters and the determinations required for their actuality in a given concrete context. The international Assembly has a responsibility to elaborate the meaning of the former in order to make the latter easier to implement. There is a level of consumer and worker risk that no one should be exposed to anywhere. If those living in one place are exposed to harms and risks above that level, while others elsewhere are not, there is not the substantive equality of a true 'solidarity society'. Worker or consumer safety regulations approved by the international Democratic Assembly cannot be weakened on national, regional, and local levels. Assemblies on those levels, however, are free to opt for stronger regulations than those the national Assembly has affirmed. Just as there is a trajectory in socialism for the minimally acceptable level of basic need provision to be raised over time, there is a strong tendency for social protections to be strengthened over time.¹⁴

It is also the responsibility of the higher-level Assemblies to ensure that sufficient reserves are stored for emergencies in particular nations or regions, and that institutional capabilities are established to deliver needed goods to areas afflicted by emergencies quickly and effectively. National and regional Assemblies have an analogous responsibility vis-à-vis regions and localities, respectively.

Considering the responsibilities of the national Democratic Assemblies in the more detail would have little point, given how closely they parallel those of the international Assembly. We can instead turn to the role of Agencies on both the international and national levels of the model.

6 National and International Agencies

All Agencies in this model of republican socialism are organised as self-governing Worker Collectives, with all those exercising authority within them elec-

14 There is every reason to expect that a deep concern for worker and consumer safety will be internalised within units of production in socialism. A model of republican socialism, however, should not be based on an assumption of perfect (and perfectly informed) altruism. Making the requirements of a solidarity society explicit is valuable and fully compatible with an expectation that these requirements will become second nature.

ted by fellow members.¹⁵ The international and national Assemblies, however, should have the powers to confirm the appointment of top-level managers and to vote ‘no confidence’ in the leadership of an organisation that has not been effective, forcing a new election. These measures will also help prevent Agencies from turning into independent power centres apart from the society they serve.

I shall not attempt to construct a complete list of Agencies appropriate to the institutional framework of socialism. We can be confident, however, that the following will prove necessary in some form or other.

We have referred to **Sector Agencies** numerous times already in this work. Each Sector Agency is charged with collecting comprehensive data regarding enterprises operating in a particular sector, aiding the functioning of those enterprises, and shaping the future path(s) of the sector’s development. The relevant Democratic Assembly has the task of designating the main sectors of production, establishing a Sector Agency for each, and overseeing their operation. On the national and international levels, it is especially important that the members of a Sector Agency represent a variety of perspectives. A selection process for national Sector Agencies was endorsed in Chapter 6: every Production Collective operating in a given sector in the nation elects one or more (depending on the Collective’s size) candidates for membership. There is then a random selection from that pool, making use of algorithms designed to ensure representation of Collectives of different sizes, geographical locations, and so on. Positions in international Sector Agencies could be determined analogously with random selection from a pool of those nominated by peers in the national Agencies, making use of an algorithm ensuring a wide range of nations are represented.

As noted, the Sector Agencies provide support for Social Investment Centres on all levels, sharing their evaluations of qualitative and quantitative data regarding the relative effectiveness of a Collective’s past use of social resources, the extent its output has effectively addressed social needs, its innovativeness, quality of work life, internal democracy, estimate of costs, and any other relevant consideration.¹⁶ The national and international Sector Agencies are also

15 To recall: there are two sorts of Worker Collectives in the model, self-managing units of production (‘Production Collectives’) and self-managing institutions of community self-governance. National and international Agencies fall under the latter heading.

16 There will be no need in republican socialism for a bureaucratic regulatory apparatus like the Occupational Safety and Health Administration in the US. With workplace democracy the safety will be a central concern of everyday life within workplaces, and not an externally imposed demand for compliance with regulations. Co-workers from the same sector

charged with disseminating information about 'best practices' in all dimensions of social production and with providing extensive support to Collectives adopting those practices. Support will be provided as well to Collectives implementing product or process innovations, including distributing information to producers in their sectors regarding relevant advances in scientific-technological knowledge, offering training courses to develop any new skills that might be needed to implement those advances, providing personnel to aid adopting them, and so on.

National and international Sector Agencies are further charged with working closely with the Research Centres engaged in advancing the frontiers of scientific-technological knowledge in fields of relevance to their sectors, and with Research Centres engaged in applied research and development in relevant fields. They also aid regional and national Democratic Assemblies in their oversight of the system of Research Centres and Social Investment Centres. And they provide Research Centres with important feedback on how their projects have contributed to innovations furthering production for social needs in the past, and what sorts of projects are thought by producers to be most likely to advance production for social needs in the future.

International Sector Agencies need to assimilate the information accumulated by national Sector Agencies in order to negotiate with Collectives hoping to operate (or continue operating) on the international level regarding the latter's estimations of the (full social) costs of production in the coming period. They also provide the international Social Investment Centres with comparative assessments of the past performance and future prospects of Worker Collectives producing on an international level. International Sector Agencies support the global diffusion of information about both advances in scientific-technological knowledge relevant to a given sector and best practices in workplaces operating in that sector, and offer units of production operating on the international level with training and support for adopting best practices

selected to serve in a Sector Agency (or the same area selected to serve in a Producer Review Board) can then monitor the effectiveness of various Collectives in dealing with safety issues. (In a similar fashion, the second solidarity constraint on the allocation of social investment and the prominent role granted in the model to Research Centres specialising in environmental sciences alleviates the need for a bureaucratic apparatus like the Environmental Protection Agency in the US imposing external environmental regulations. Production Collectives that do not effectively internalise environmental concerns in their daily lives will not be socially funded, end of story, with relative effectiveness assessed by co-workers from the same sector or region and Research Centres specialising in environmental monitoring.)

and innovations. They can, finally, lobby international, national, and regional Research Centres to undertake basic research and long-, medium- and short-term research and development projects tackling scientific-technological issues of special concern to international-level producers in their sectors.

Just as local and regional Democratic Assemblies must establish and monitor the performance of Agencies to oversee the provision of universal₁ goods, and the universal₂ goods distributed as free public goods on those levels, the national and international Democratic Assemblies must do the same for higher-level communities. These higher-level **Community Agencies for Well-being** have in addition the responsibility of determining 'best practices' in accomplishing assigned social tasks and disseminating information regarding these practices to local and regional Agencies for Well-being. The national and international Agencies must also provide education, training, and personnel support to local and regional Community Agencies committed to adopting best practices, paralleling the support Sector Agencies provide to units of production.

Perhaps each universal need should have a separate Agency devoted to collecting information about how it is being addressed in different places. **Transportation, Energy, and Information Agencies** could assess the transportation, energy, and information networks that have been established in reports to the national and international Democratic Assemblies. A **Housing Agency** ensures that high standards are maintained in the provision of public housing in socialist society, a **Nutrition Agency** monitors diets relative to a food pyramid undistorted by profit seeking, and so on. A **Consumer Agency** can be included under this heading, charged with ensuring that all persons have access to adequate and accurate information regarding products that might aid them in living the lives they have chosen to live. If international-level Wellness Agencies have relatively little to do, that would be a good thing. That would mean the national-level Agencies were accomplishing what they should be accomplishing. Nonetheless, if there is a standard of adequate housing, for example, that no one should be deprived of simply because they live in one nation rather than another. Some international political body should verify that this standard has been met. This Agency can also take a lead in organising conferences and other sites for exchanging ideas regarding new and possibly better ways of housing that encourage community and flourishing. Neither of these functions is provided adequately in capitalism.

* Social development is not determined either solely or ultimately by scientific-technological development. Economic or political reductionism is also not defensible. Culture matters in social life, both in the broad sense of customs and traditional practices and the narrower sense of literature, visual

arts, music, and so on. Cultural determinism is no more defensible; cultural factors do not fully determine subjectivity or the horizon of possible actions. But culture does profoundly shape both subjectivity and the horizon of possible actions available for subjects to consider. A **Cultural Agency** should be established on the national level to ensure that every individual has ample opportunities to experience and explore a wide range of cultural expressions (local, regional, national, and international, as well as 'high' and 'low'). This Agency can profoundly contribute to solidarity across borders by fostering cultural pluralism along with a frank acknowledgement of how achievements of specific national cultures have been made possible by the achievements of others.

A special sort of universal₁ social need is a second-order social need, so to speak: the need for the institutions and practices addressing first-order social needs to function properly. Members of Community Associations, Producer Review Boards, Social Investment Centres, Democratic Assemblies, National Sector Agencies, Research Centres, and any other institution that forms part of the socialist framework must sometimes undertake tasks requiring specialised administrative capabilities. Community Associations, for example, must formulate, administer, and interpret qualitative and quantitative surveys regarding how effectively universal and particular needs have been addressed in the given community. A special national **Agency for Technical Support** should be established to train support staff necessary for the effective operation of the institutions of socialist self-governance.

Advocates for a socialism for the twenty-first century must be alert to the potential dangers of bureaucratic power the institutionalisation of support staffs may raise. These dangers have by no means been limited to so-called state socialism. In contemporary capitalism examples abound of support staff that insinuate themselves in government agencies and boards, remaining in place as official members of the agencies and boards come and go, consolidating a distinct self-identity, coming to believe that they are the ones who 'run the show' for the very good reason that they so often are.

One way this danger can be checked in the socialist model is by relatively long, but limited and staggered, terms of the members of the institutions of socialist self-governance the national Agency for Technical Support serves. With six-year terms where a third of the total membership is selected every two years so that at any given time two thirds of the membership will have at least two years' experience, and one third will have at least four. New members can then learn what needs to be learned from experienced mentors, lessening the likelihood of being manipulated by a support staff with its own agenda.

Another measure would address the danger from the inverse direction: members of the support staff could be assigned to a given agency or board for a limited brief period of time. If they were reassigned every four years, for example, they would not be able to accumulate a vast network of alliances in a specific Agency granting them undue power over a particular Agency's operation.

Personal safety is a basic (universal₂) need of all individuals. The general safety of communities is a collective universal₁ need shared in common by all members of communities. A **Public Safety Agency** is required to ensure these needs are adequately addressed. This Agency is needed despite the fact that threats to personal and community safety will be greatly reduced in republican socialism from what they are today.

* Much crime in capitalist market societies undoubtedly is due to a failure to provide a decent standard of living and social respect to all, a commodified culture that glorifies violence as a business strategy for generating profits, a realistic assessment by far too many that they have no realistic hope for advancing their life prospects, and so on. All this can be changed.

* Other crimes are caused to a significant degree by a social order that makes the accumulation of money an end in itself, systematically encouraging a search for shortcuts to accumulation. The street criminal, the drug lord, and the white-collar committer of fraud are not different in this regard, however different they may be in access to lawyers, tax accountants, pliable politicians, and so on, to hide their transgressions and protect them when transgressions are uncovered. All this too can be different.

The universal provision of the material preconditions for dignity in republican socialism, and social practices institutionalising mutual recognition and mutual respect in daily lives, will also mitigate the drive to assert a sense of self though flouting formal and informal social norms.

* The use of the criminal system to deal with a surplus population generated by structural unemployment will be eliminated with the elimination of structural unemployment.

* Racism, toxic masculinity, and other forms of cultural prejudice and oppression underlie countless infringements of the right to personal and group safety today. These phenomena will not spontaneously and instantaneously disappear in socialism. But there will no longer be a stratum

of society with a strong material interest in mobilising them as part of strategies to 'divide and conquer' the workforce.

The positive consequences for personal and community safety from the transformation of the background conditions of social life should not be underestimated. Nonetheless, it would be naïve to think crimes will never occur in socialism.

There likely will always be those who want what others have and try to take it by force or fraud, and those who will get perverse pleasure from intimidating others with violence or the threat of violence. Unfortunately, it is also likely that in socialism there will be some who dislike or fear others with different lifestyles, different voluntary associations, different views. Some of them may act on the basis of this dislike or fear in ways that disrupt civic life and inflict harm on others. And while the institutional design of socialism greatly reduces opportunities for those holding positions of authority to abuse their power, no system can be expected to eliminate such abuses entirely.

While we can expect domestic safety concerns and abuses of power to be far less than what they are in contemporary capitalism, a viable model of socialism must include institutions and social practices providing individual and group security of persons and personal possessions – including freedom from psychological abuse as well as physical attack, and from latent as well as overt threats of attacks and abuse. National, regional, and local Democratic Assemblies must establish special Agencies whose members are trained to protect social individuals and groups from being harmed or threatened with harm by others.¹⁷

An international Agency for Public Safety would monitor how socialist nations dealt with safety issues, determine 'best practices', and disseminate information about them.¹⁸

A **Judicial Agency** is a necessary complement to a Public Safety Agency. Trial before a randomly selected jury of peers remains the most democratic approach to investigating whether criminal transgressions have occurred. As for judges, they must be as publicly accountable as those holding authority in any other institution of collective self-governance.

There are undoubtedly a range of acceptable ways judges in a socialist society could be selected. Direct election of judges serving on the local level seems appropriate, with candidates having to document their comprehension of the

17 It should go without saying that harm and abuse inflicted by members of Collectives having this special responsibility will be considered especially heinous offences.

18 Public safety also involves safety from external threats. That fraught topic will be considered later in this chapter.

socialist constitution and legislation of Democratic Assemblies. Local Judges, the members of the local Public Safety Agency, and the subcommittee of the local Democratic Assembly assigned to monitor the operations of the local judicial system, could then nominate some number (proportional to the size of the local community's population) of judges for the regional Judicial System, with half the members of the judicial system on the regional level then selected by lot from that set of nominations, half elected by the region's citizens. The process could be repeated on higher levels in order to determine the members of national and international Judicial Agencies. (The socialist constitution is international in scope, requiring an international judicial system.) Extended but not lifetime terms seem appropriate (perhaps ten years). A vote to recall a judge can be called for at any time on any level, requiring either a vote of no-confidence by the relevant Democratic Assembly or a petition with, say, twenty percent of the adults in the given community.

Here, as elsewhere, most concrete determinations of the socialist model are left open. If discussion reveals some other manner of determining things is more likely to fulfil the purpose of a judicial system in socialism, the model should be modified to incorporate the superior alternative.

7 The National and International Innovation Systems

The previous chapter discussed regional innovation systems. There is also an important role for national innovation systems in the socialist model.

7.1 *Tasks of the National Innovation System*

Most basic research and research and development projects foreseen to have significant practical implications for a particular sector in the short-to-medium term can be left to the regional innovation systems in places where Collectives operating in those sectors are clustered. Regional innovation systems can also be delegated responsibility for nurturing start-ups promising to make significant contributions to those sectors in the short-to-medium term. The national innovation system can then focus on Research Centres giving special emphasis to 1) scientific-technological research that does not have foreseeable practical implications but is worthwhile doing for its own sake, 2) basic research and R&D undertaken in the hope that it may have practical implications for some sector or sectors in the medium-to-long term, 3) general projects that can be foreseen to have clear importance for a number of sectors, and so are likely to be underfunded by regional innovation systems focusing mostly on special purpose innovations for particular sectors, and 4) projects of special social urgency.

Regional Social Investment Centres will naturally prefer to invest in Production Collectives that have already shown they can effectively address social needs in their region over newly formed Collectives hoping to contribute at some indefinite point in the future. An innovative society, however, requires support for the latter as well. It would be appropriate to mandate that a certain percentage of regional funds be devoted to risky high-tech start-ups. By itself, however, that will not be sufficient. A national system of *incubator parks* is needed to nurture start-up Collectives after they have reached the 'proof of concept' phase of an innovation (accomplished within development-oriented Research Centres). Some ample but limited amount of time should be granted to establish that the innovation in question addresses a given social need in a better way or can be anticipated to elicit a new need freely endorsed by social individuals, and that its production can be successfully 'scaled-up' outside a lab. At its conclusion of this period the Collective must request funding from a Social Investment Centre (local, regional, national, or international, as appropriate), leaving the incubator park if it is granted. If it is not, the project is discontinued and the Collective dissolved. Interested researchers, however, would be generally free to pursue discontinued lines of research as commons-based peer production projects, or within Research Centres with the approval of fellow researchers or their elected managers.

The education system as a whole can be considered part of the national innovation system. It provides a general background in science and technology for future knowledge workers, educating and training the next generation of scientific-technological specialists, and fostering the background knowledge required for informed citizen participation in science and technology policy debates and decisions.¹⁹ The national education system must also ensure a steady stream of knowledge workers capable of contributing to Research Centres on the national level.

Production Collectives are clearly an essential component of the national innovation system as well. They can take full advantage of results generated by Research Centres only if members have scientific-technological capabilities. This includes at a minimum the scientific-technological background and experience required for implementing innovations. In many cases a necessary precondition for innovating is that the Collective itself undertakes scientific-technological R&D, often in collaboration with members of universities and

19 In other contexts, other important dimensions of the education system would be of stressed, such as its role in preparing students to participate in public life as informed citizens.

national and regional Research Centres interested in the same sorts of projects. A key task of a Sector Agency will be to monitor the quantity and quality of the innovations undertaken by Production Collectives in the given sector, providing support for improving their research capabilities.

The informal collaboration in scientific-technological projects undertaken within *commons-based peer production* will be an increasingly important part of the national innovation system. It will be discussed in the following chapter.

As elsewhere in the model of republican socialism, in the national innovation system there is a complex dialectical balance of conflicting considerations. Experience and expertise matter for some social roles more than others. We want our water supply to be managed by people with the theoretical and practical knowledge to keep it safe. The same holds for positions in the national innovation system. A Research Centre, university lab, or start-up in an incubator park is a special type of workplace. Very specialised expertise is required to make informed judgements about the quality of research and promising paths of future innovation. Respect for expertise, however, cannot be result in experts becoming a privileged caste, unaccountable to the society at large. A dynamic balance must be maintained.

Like all Worker Collectives in republican socialism, those exercising authority in Research Centres, university labs, and start-ups are directly accountable to those over whom their authority is exercised. The heads of Research Centres are elected (and subject to recall) by fellow scientific-technical workers in these Centres. Wider social accountability is required as well.

In the model here candidates for heads of the various national Research Centres must be formally approved by the national Democratic Assembly. The Assembly also has the power to dismiss them when they have lost the confidence of the wider society. The close monitoring of research projects by the Sector Agencies further helps maintain the balance between specialised expertise and the broader social good. If research threatens to become too detached from the needs of producers, these Agencies are there to sound the alarm. Similarly, if the research projects threaten to become too detached from addressing needs for individual and social consumption goods, Community Activist Groups and Community Associations can be expected to quickly bring that to attention, pressuring the Democratic Assembly to intervene if adequate adjustments are not made. To counteract the inverse danger of excessive concern with short-term projects designed to avoid complaints by Sector Agencies and Community Associations, a significant percentage of the research budget should be set aside for 'blue skies' projects that have the potential to push the frontiers of scientific-technical knowledge but are not anticipated to have any social benefits for the foreseeable future.

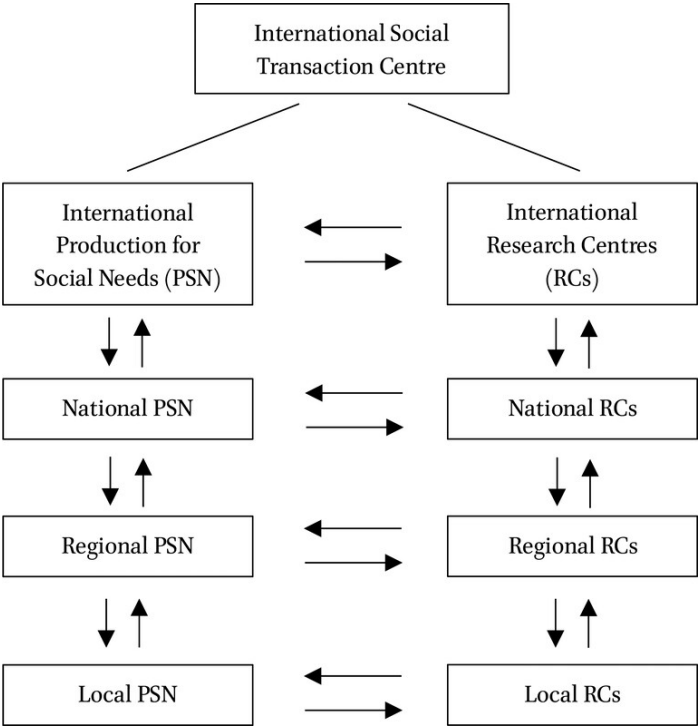


FIGURE 13 Research centres in the model

Figure 13 attempts to capture the close interconnection between the system of production for social needs on local, regional, national, and international levels and the system of innovation.

There is another institution of socialist self-governance extremely important for making sure that natural and social science in socialism is ‘science for the people’. It will be considered next.

7.2 Science Juries

Whenever a research project or potential innovation might affect (or is affecting) social life in a problematic fashion, the national or international Democratic Assembly needs to establish a randomly selected *science jury* to investigate. Given the significance of these juries, the bar for forming one should be relatively low. A provisional suggestion is that a jury should be formed if either twenty percent of the members of any Assembly or Research Centre vote to do so, or if a Community Activist Group submits a petition with the signatures of ten percent of adult citizens.

Once established, the science jury will first hear the arguments of those with serious concerns about a research project or innovation and the evidence

that supports their concerns. Those who support the research or innovation will then respond to those arguments and that evidence, presenting counter-arguments and counter-evidence. Juries have the power to subpoena anyone whose testimony in their view might prove relevant. The members of science juries must also be afforded time to study the issues. They then deliberate whether or not the project or innovation should be unqualifiedly endorsed. If concerns are serious enough to justify withholding unqualified endorsement, members of the jury deliberate on an appropriate action. They could decide to impose extraordinarily stringent safety regulations for the research, or a temporary moratorium on introducing an innovation into the social world until its likely consequences are better understood. In extreme cases a science jury can judge that the research path or innovation should be completely halted.

If Research Centres undertaking the research in question, or Production Collectives introducing an innovation, accept that the jury's decision is not unreasonable (this is not the same as agreeing with it), the decision holds for some fixed period. If after, say, two years new evidence has come to light, a subcommittee for technology policy of the national or international Democratic Assembly can establish a new jury to re-examine the matter. If Research Centres or Worker Collectives wish to appeal a jury's decision, local Democratic Assemblies must organise a series of public forums where alternative view on the matter can be presented, followed by open discussion. These forums must be disseminated by the public media, allowing virtual participation and the chance to see how the issue is being addressed in other communities. At the end of this process a public referendum determining the dominant public view resolves the issue.

If at the end of the day research is restricted on the international level, that is the end of the matter. If a national-level science jury calls for restriction, an international-level jury is automatically established to investigate whether an international restriction is warranted. If the international science jury refrains from judging that restriction is justified, the research in dispute continues to be restricted on the national level where the jury found otherwise.

As has happened so many times before in this work, we have reached a point where some option must be selected out a range of options, none of which can claim to be *the* single best way of organising social life. In my view, no research agenda or innovation should continue to be provided with extensive public funding if a supermajority of voters (60%, say) does not wish it to continue after having had a chance to consider the various arguments on all sides. If it is supported by a supermajority, that too is the end of the matter, at least until compelling new evidence emerges.²⁰ If, however, a referendum does not pro-

20 Here too, however, interested researchers would be generally free to pursue discontinued

duce a supermajority in either direction, perhaps the best solution would be to leave the final decision to the national Democratic Assembly, whose members have a special responsibility to be informed about the most relevant matters, further innovative dynamism, and foster the public good.

I have stressed throughout this book that an acceptable form of socialism must balance the social good of democratic participation with the social freedom of individuals and groups to choose to not to be continuously devoted to public policy matters. Further, those who do freely choose to be politically mobilised for extended periods will at some point reach the limit of the number of issues they can be significantly informed about. If paths of scientific-technological development and innovation were left to only to referendums, a small but motivated and organised subsection of the society might dominate public discussion, leading to decisions that a significant majority would not have accepted had they devoted the time and effort required to be adequately informed. We also know that people today are susceptible to misestimations of risks. Some systematically understate them, refusing to vaccinate their children against polio. Others assign far more weight to some sorts of risks than is warranted, fearing flying more than driving a car to the neighbourhood supermarket.²¹ We also have strong evidence that scientific-technological experts tend to be overly confident in their knowledge, overly quick to dismiss the possibility of harms arising from processes they do not fully comprehend. These psychological propensities are greatly exacerbated in capitalist market societies. (Scientists dependent upon corporate funding, for example, are generally not disposed to emphasise the risks of their funders' products.) Still, we should not simply assume these propensities will completely disappear in a socialist society.

General public participation and specialised expert knowledge are both necessary in republican socialism. It would be utopian in the bad sense to assume no tension between the two will ever arise. The regular use of science juries, combined with oversight of the national innovation system by the other institutions of socialist self-governance, offers an acceptable balance.

Before leaving this topic, it is worth noting how infrequent the need to resolve conflicts over the direction of research or innovation is likely to be in republican socialism. In capitalism, the subsumption of science and technology under capital necessarily tends to encourage forms of scientific-technological change inflicting serious harms on people whenever there are

lines of research as commons-based peer production projects, or as unfunded projects within Research Centres with the approval of fellow researchers or their elected managers.

21 These topics are explored in depth in Shrader-Frechette 1991.

high profits to be made.²² In socialism there will be cases where the potential social consequences of a research project or innovation are not widely understood, or where they involve risks some members of the community do not wish to bear, or forms of social change that some do not wish to undertake. In these cases, Democratic Assemblies, science juries and public forums have an essential role to play in socialist self-governance. But in the absence of immense private gains from private decisions to pursue scientific-technological change without adequate consideration of its social effects, far fewer scientific-technical controversies are likely to arise. And when science juries and public forums are called into action, advocates and critics of a given path of innovation will engage in an extensive exchange of views. Without the power of private profit interests to distort discussion, the social space for each side to learn from the other greatly expands. In most cases it soon should become clear whether there are legitimate reasons for concern. Criticisms and justifications that can be countered easily and convincingly will tend to be withdrawn.

Of course, we cannot assume that the process sketched here will always conclude with a rational consensus on the one correct view. There will be cases where things go wrong; *no* institutional framework and system of social practices can plausibly claim to always generate perfect results. But the tendency for a good result will be far stronger than it is today. It is enough if an institutional framework and set of social practices significantly lessen the chances of socially irrational outcomes relative to alternative frameworks and practices, including self-correcting mechanisms to correct errors when they do occur. Overcoming the distortions of technological-scientific development due to its real subsumption under the imperatives of capital has a prominent role in the socialist project.

7.3 *The National Innovation System: A Form of Central Planning*

No central plan eliminates the need for decisions mobilising human initiative, insights, and creativity in concrete contexts. No market system eliminates the need for planning, whether this is admitted or not.²³ Any feasible social

22 The technologies of extracting sugar from corn crops and injecting it into countless foods and drinks is a perfect example; massive profits for Big Ag came at the very much foreseeable social cost of an epidemic of diabetes and environmental harms. The horrific social consequences of Big Pharma's commercialisation of opioids offer another illustration (Keefe 2021).

23 One of countless examples: without a (planned) highway system built with federal funds in the US after World War II, there would have been no 'golden age' of Fordism.

system combines centralised and decentralised components and centralising and decentralising tendencies. Here too the goal is a dynamic balance of the two that neither bureaucratic central planning nor unleashed market forces are capable of attaining.

The regional innovation system discussed in the previous chapter involves central planning in two key respects. Direct planning is required to establish and maintain the system in the first place. Decisions must be made about the specific components to be put into place (How many Research Centres are needed? What should they specialise in?), and how they are to be put into place (Should a Research Centre be established in this locality or that?).

A second form of planning in the regional innovation system is more indirect and open-ended. Establishing a regional innovation system does not in itself determine a specific path of scientific-technological development. Nonetheless, once one has been set up, directions of development are realistically possible that would not have been if a different sort of regional system, or none at all, had been established. If Research Centres in a particular region focus on innovation in agriculture, agricultural development in that region is obviously far more likely to occur. A regional innovation system, in other words, is a form of planning for future regional development.²⁴ Similarly, a national innovation system is a form of planning for future national development. When the tasks of the national system described above have been completed, and when science juries have finished their deliberations, some directions of future development are viable and others are effectively ruled out. Establishing and maintaining a comprehensive and effective national system of innovation has not been left to chance in any advanced capitalist society, and it will not be left to chance in socialism. But neither will it be the contingent outcome of power relations among political elites, bureaucratic infighting among state agencies, and corporate lobbying.

An especially important form of planning concerns the integration of regional innovation systems within the national system. Different regional systems, each focussed on a specific sector (or very limited number of sectors), need to be integrated into a system of systems, so to speak, in a relatively coherent manner. In the spirit of the first solidarity constraint, we can propose that

24 I certainly do not wish to endorse technological determinism here. Social development is not determined either solely or ultimately by scientific-technological development. As noted above, for example, cultural beliefs profoundly shape our (inter) subjectivity, simultaneously opening and restricting the horizon of activities available for social agents to consider undertaking.

in a solidarity society funds for regional systems of Research Centres are distributed in proportion to regional population, just as funds for investments in Production Collectives are.

This leaves the question of how these funds will be used. The principle of subsidiarity clearly implies that regions themselves must play a central role in answering that question. This is an appropriate matter for the regional Democratic Assembly. In order to ensure the coherence of the national innovation system as a whole, however, the national Democratic Assembly needs to approve proposals from regional Assemblies to establish or maintain a regional innovation system focussed on a specific sector (or a fairly small number of sectors).

The proposal must take into account all available relevant information, including the democratically determined social needs the regional innovation system would help address, the relative priority of those needs, the elements of a system already present in the region (research, teaching, and training facilities, the skill sets of members of existing Collectives, the fixed means of production in place, potential and actual networks of suppliers, and so on), along with any additional components of an effective regional innovation system that would need to be put in place. Input from Community Activist Groups, Community Associations, regional and local producers, Sector Agencies, and social agents living in the region, must be solicited and incorporated in the regional Assembly's deliberations. Information about regional innovation systems that exist or are likely to be established in other places is also very relevant in these deliberations.

When the national Democratic Assembly has received all of the proposals, its members must consider a host of trade-offs. A vigorous national innovation system generating a steady stream of innovations capable of enhancing people's lives is characterised by pluralism, experimentation, risk taking, a space for heterodox views to establish new paradigms, and so on. But not every possible path of scientific-technological development can be taken. Resources wasted on duplicating projects, or on projects doomed to be dead ends, are not available to address other social needs.

If no region in the nation chooses to devote its efforts to a regional innovation system specialising in scientific-technological research of special relevance to a particular sector or sectors, the national Democratic Assembly might decide after deliberation that innovations emerging from other regional innovation systems would likely be sufficient to maintain the dynamism of the neglected sector(s). Or its members may conclude that the desired dynamism would likely not be attained, leaving needs of high priority inadequately addressed in the long term. In the latter case national-level Research Centres

could be instructed to fill in the gaps. If the needs in question are truly important, a social learning process will likely soon lead to proposals from one or more regions to establish a research cluster devoted to advancing the productive capacity required to address that need effectively. If no region steps up, that suggests that either the learning process has not yet been completed, or the needs in question are not in fact so central to social life at the given point of time.

If, as seems more likely, the opposite problem arises and a number of different regions propose developing similar regional innovation systems, a decision must be made whether more than one should be established, taking into account the relative priority of the social needs in question and both the benefits of pursuing alternative paths to innovation and the costs of likely duplication. Similarly, if (as also seems likely) initial requests for investments in regional innovation centres in total demand a higher percentage of total investment funds in regional systems than socially warranted, decisions will also have to be made regarding the appropriate level of resources for a reasonably comprehensive and coherent system of different regional innovation systems within the national community.

As in other cases, the crucial matter is that crucial decisions in republican socialism are socialised.

Once again we cannot assume that all members of a socialist society will freely choose to devote the time and effort it takes to be comprehensively informed about possible directions of scientific-technical advance, the sort of social innovation systems best suited to develop the most promising advances, the reasons a particular sort of innovation system could be developed more effectively in one place rather than another, and all the other complex factors relevant to science and technology policies. In general, the confidence we have that social individuals themselves know best what available and relatively familiar goods will most effectively address their immediate needs cannot be duplicated when we ask what medium-to-long-term paths of research and development are most likely to further social needs in the medium-to-long term. These considerations supply strong reasons to mobilise the expertise found in Sector Agencies and Research Centres and to give a key role to a democratically elected Assemblies.

We are familiar with Sector Agencies, charged with oversight of the major sectors of production for social need, and the system of Research Centres, charged with providing sectors with a steady stream of implementable innovations and start-up enterprises. The members of both have a good sense of the possibility spaces for innovations in the medium to long term. In our proposed model each Sector Agency and each main Division of the system of

Research Centres, elects representatives making up a third of the membership of a **National Planning Board**. Another third will be selected by lot from the citizen body at large, and the final third selected by lot from a list of those nominated for possible membership by Production Collectives. The Planning Board will consider the merits of proposals for constructing, maintaining, restructuring, or dismantling particular regional innovation systems both in themselves and within respect to their integration into a reasonably coherent national innovation system. Its deliberations culminate with a recommendation for the national Democratic Assembly to affirm, modify, or replace.

With representatives from Sector Agencies, Research Centres, and Production Collectives serving on the National Planning Board, its recommendation is not likely to devote resources to fields where the opportunity space for innovation is judged to be low by producers or by those with those with an extensive scientific-technological background. The roles of randomly selected citizens on the Board and the elected and accountable members of the Democratic Assembly make it unlikely that long-term projects with reasonably good chances of enhancing individual and social consumption will be overlooked. The fact that members of the national Democratic Assembly represent a diversity of regions make it likely its decisions about regional innovation systems will not be considered unreasonable by those in different regions.

Once again there is no perfect mix of informed decision-making and maximally participatory decision-making waiting to be discovered. For our purposes it will suffice if we can describe a decision-making process those committed to the socialist project find acceptable and feasible. Perhaps the National Planning Board could submit two (or more) alternative plans plan for a national innovation system integrating regional systems the national Democratic Assembly, specifying the sectors where the greatest social resources would be devoted to product and process innovations. If after debate a plan (with or without amendments) receives a supermajority of the Assembly of members' votes (60 percent, perhaps), it is accepted. If no proposal reaches this threshold, a series of public forums devoted to discussion of the plans could be held, culminating in a popular vote. If no plan has the support of a simple majority of voters, the National Planning Board is asked to revise one or more initial proposals to take into account criticisms made in the Assembly's deliberations and public forums and, perhaps, or formulate a new option. If at the end of the second round no proposal emerges with sufficient support, a simple majority of the national Assembly decides the matter, opting for a revision of a proposed plan or new one constructed to address the most serious objections to earlier plans.

While the process of selecting a plan for the national innovation system is important, it is no less crucial that it be revised when revision is called

for. Throughout the period a plan is in place it must be regularly evaluated by national, regional, and local Democratic Assemblies. Citizen juries can be convened to consider its workings as well. The continuous oversight of independent judges would also help the formulation and implementation of a plan remain consistent with the commitments expressed in the socialist constitution. Every institution in the socialist model has an incentive to monitor how the national innovation system is working. All members of socialist society have access to all the relevant information required to make an informed assessment for themselves.

Deliberations and decisions about the long-term plans for the national innovation system could coincide with the process of determining the indicative plan for production for social needs on the national level. Over the course of the subsequent five-year period ideas could be explored for revising the priorities of the national innovation system in the next period. Once again, the challenge is to integrate incommensurable considerations. Continuity is a social good, but so is flexibility. Change for change's sake is to be avoided, but so is continued adherence to paths that later appear less promising than they initially did or have been rendered irrelevant due to changing circumstances. Here too there is no perfect procedure guaranteed to always generate the one best result. Reasonable and revisable results must suffice.

Many whose views fall somewhere on the wide spectrum from libertarianism to market socialism may have been triggered by use of the term 'plan'. It is supremely important to acknowledge that planning has never not been part of capitalist market societies. In complex modern societies scientific-technological advance is not a haphazard process undertaken by random individuals and groups. Innovative dynamism requires a national innovation system and explicit decisions about the general direction of research within that system. In one form or another all states at the centre of the capitalist world market are 'developmental states'. None leave future paths of development to the 'spontaneous order' of Hayek's fantasy. In the United States, for example, the long-term planning for innovative military technologies undertaken by the Department of Defense in collaboration with the firms in the military industrial complex is in effect long-term planning for the future paths of economic development in the US.²⁵ Insisting on a stark opposition between 'markets' and 'plan' is as uninformed as it is undialectical.

25 Chomsky advised investors who wanted to get in on 'the next big thing' to learn what DARPA was investing in today, since that determines what is most likely to be commercialised in coming years (Chomsky 2004). This was excellent advice.

It is also worth repeating that the planning under discussion here is not to be identified with the comprehensive central planning attempted in bureaucratic command economies. As we have seen, planning in the model of republican socialism occurs through the interplay of forms of representative democracy, sortitive democracy, and direct participatory democracy. For another, the plan does not take the unworkable form of a complete system of consistent equations of inputs and outputs. Such equations at best present an extremely idealised (oversimplified and misleading) abstraction of an economy at a moment of time. A dynamic society in principle cannot be adequately modelled by a static abstraction. In the model advocated here there is a complementary feedback relationship between centralised decisions regarding the general direction of innovation and the decentralised decision-making determining specific R&D priorities and the realisation of potential innovations. The latter decisions, made within an institutional framework including Community Activist Groups, Community Associations, public forums, Production Collectives, Social Investment Centres, science juries, and so on, is designed to mobilise the creative intelligence of the society as a whole in the ongoing process of formulating, applying, and revising decisions regarding the direction of socialist development.²⁶ The flexible indicative plan that emerges from this process produces options and opportunities, not commands. Some options will be incorporated into social production to address social needs. Some will not be. Planning can be effective without being total and without being authoritarian.

The radical uncertainties of research and the freedom with which free social individuals define and redefine their social needs may ensure that no plan for the national innovation system can ever be assured of generating perfect results. But the paths of innovation in republican socialism will tend to further the 'full and free development of every individual' far more than any variant of market society. That is more than sufficient.

7.4 *The International Innovation System*

I have noted on a number of occasions how competitive advantages from innovations enjoyed by units of capital based in wealthy nations contribute to the systematic reproduction of extreme inequality and poverty in global capitalism. Only a relative handful of countries have been able to establish and maintain national innovation systems generating those innovations, condemning most of the world's population to a subordinate status and mater-

26 In Hegelian-speak, the universal plan is not opposed to the particular; the universal is actualised in the particular, unified with it while remaining distinct.

ial deprivation. Within international socialism these disparities will be dismantled. The 'dissociation sociality' expressed in a competitive war to the death among units of capital in the world market will be abolished. And advances in scientific-technological knowledge will be treated as part of the global commons, available for Production Collectives anywhere to appropriate and use.

There is no need for a distinct international innovation system duplicating national innovation systems. International Research Centres should instead focus on projects of extraordinary scale (experiments requiring the construction of immense and immensely costly supercolliders, for example) or have extraordinary global priority (such as the development of technologies helping to maintain planetary conditions within boundaries compatible with human well-being), with the international Democratic Assembly having the power to select among projects falling in these special categories. National-level Research Centres could nominate candidates for a **Global Research Council** whose membership is selected by lot from those candidates. This Global Research Council could then submit a recommendation to the international Democratic Assembly listing the general research projects that would be appropriate to pursue on the international level, priorities among them, and the investment funds they require. After the Assembly has approved the recommendation (perhaps in modified form), it instructs the international Social Transaction Centre to allocate funds to existing international Research Centres capable of undertaking approved forms of research and to new Research Centres established by the international Research Council when the members of the Council believe they are necessary for approved projects. Global capitalism has already brought about considerable international scientific and technological cooperation and collaboration. A global innovation system along the lines described here would surpass that level of collaboration and direct it to a far better ruling purpose.

Parallel to other levels, the system of international Research Centres should encourage competing projects while avoiding excess duplication. And it should encourage heterodox and 'blue sky' research programmes, while avoiding projects that show little promise of ever generating significant results. Here too there is no perfect balance, only an indeterminate range of reasonable ways to make the inevitable trade-offs. Here too setting aside a portion of the international research budget for heterodox and 'blue skies' research would be appropriate.

International investment in research and development should also be seen as a form of long-term planning of the general direction of global development. Selection from the indeterminate range of possibilities opened up by scientific-

technological advance is then left open for social agents in the future to decide within the democratic structures and social practices of republican socialism.

It is not appropriate to attempt to fix the precise level of funding to be devoted to innovation systems in republican socialism. We could extrapolate from spending in the most technologically advanced countries in contemporary capitalism and anticipate a figure in the range of 2–3 percent of the funds created by the international Social Transaction sector. The precise figure, however, is a matter for the international Democratic Assembly to determine. We can be more confident in asserting that the two Solidarity Constraints must remain in force in this dimension of the model. Every national innovation system and every regional innovation system receives its equal per capita share. And every allocation of research funds on every level must take into account the need to establish and maintain an aggregate environmental footprint maintaining planetary conditions suited to human flourishing, with the ample support of Research Centres specialising in environmental sciences this requires.

8 The Fraught Relationship with the Remnants of Capitalism

In the beginning of this chapter, I stated that the international level of determinations in the model of socialism presented in this work is not based on the assumption that socialism has been adopted worldwide. This raises the question of how the socialist and the capitalist sections of the globe interact. Future contingencies prevent much from being said on this topic. Nonetheless a few remarks can be hazarded.

8.1 *Environmental Policy*

As long as a significant part of the globe remains governed by capital's valorisation imperative, it is likely that the environmental effects of the capitalist system will continue to bring us closer to catastrophe. This forces an extremely difficult question on socialists committed to responsibly limiting the environmental footprint of human activity. Should the aggregate footprint of the socialist world be determined by what would be compatible with the desired planetary states under the counterfactual assumption that everyone, including those in the capitalist world, accepted the second solidarity constraint? Or should the aggregate footprint shared within the socialist world be determined by what would be required to maintain acceptable planetary states given the fact that a significant part of the world continues to inflict unacceptable levels of environmental harms?

There is no good answer.

If we opt for the former, the systematic tendency in capitalism for global, local, and everything in-between environmental crises may not be reversed. The existential threat to the human species would then remain unanswered, with horrific consequences. If we opt for the latter, acceptable planetary conditions might be possible, but at the costs of immense sacrifices by those carrying out the socialist project. Over time the environmental footprint of the socialist sphere would have to shrink drastically, as capitalism's plunder of the earth continued. And even that might not be sufficient to prevent planetary conditions from becoming unsuitable for human life, give the wastes and depletions of societies subject to capital's imperatives of commodification, monetarisation, and valorisation.

The first option is, I believe, somewhat less bad than the second. In the second proposal, the rate of environmental destruction in capitalism suggests that the level of sacrifice required of the socialist world to compensate would very likely become immense over time. If the level of sacrifice for pursuing the socialist project is too high, the project has no realistic prospect of winning mass support. The socialist project is based on an alternative hedonism locating happiness in other aspects of life than material consumption. But it is not and cannot be based on a call to embrace increasingly severe material deprivation, especially if that only delays the worst effects of capitalism's insane 'Grow or die!' principle for a bit. The existential threat posed by capitalism can only be met by a socialist project offering hope.²⁷

In the socialist model defended here, then, the allowable environmental footprint is based on the allowable per capita limit taking every person on the planet into account, and not just those living at a given moment in socialist societies. There are great risks to us and other species with this option. But they would be less than what they would be were there no attractive alternative to capitalist market societies.

8.2 *Trade Policy*

What of trade relations between the socialist part of the globe and the remaining capitalist sphere? Insofar as we are assuming that each socialist nation has a vibrant national innovation system where advances are freely shared and supported by an international research system, capitalist firms and countries will not have a lasting monopoly on either scientific-technological knowledge or innovative products. But they may sometimes have a head start. And they may contingently claim a monopoly on certain scarce natural resources. (In gen-

27 The importance of this permeates Hägglund 2019.

eral, the more extensive the socialist federation, the more likely that the natural resource in question can be found in some area within it.²⁸) In these cases the question of exchanges across different systems is sure to emerge.

If agents in one capitalist country wish to make a purchase in another and their national currency is accepted as a form of world money, they can purchase whatever they wish directly so long as insuperable trade barriers are not in place. Otherwise, they must obtain an accepted form of world money or the domestic currency of the region they wish to buy from, whether by borrowing from financial markets offering foreign currency in exchange for debt obligations, by exchanging domestic currency for foreign currency, or by selling exports to obtain foreign currency. The first two options are ruled out for socialist societies.

The option of borrowing to obtain foreign currency to purchase imports should be avoided at all costs. As the lesson of Yugoslavia and similar cases teaches us, becoming indebted in global financial markets can doom a socialist project. The option of selling socialist 'currency' in capitalist currency markets is ruled out by the fact that the domestic currency of a socialist area is not money in the capitalist sense (or that of any pre-capitalist social order). It is something new in world history (hence the justification for scare quotes or a term like 'quasi-money'). It has no use outside the socialist world. It cannot be used within the socialist sphere to hire labour power, purchase means of production, or to take an ownership stake in a unit of production or distribution. Socialist currency could be used by those outside the socialist alliance to acquire goods for personal consumption within socialist areas, but that prospect would not be very attractive to credit markets or currency traders.

This leaves the export option. One approach would be for a **Foreign Transaction Agency** established by a national or the international Democratic Assembly to purchase (with quasi-money created for this purpose) a collection of goods from Production Collectives that agents in the capitalist regime would be willing to acquire with their domestic currency. After sales have been made the foreign currency could then be used by the Agency to acquire the natural resources or other needed imports.

This is not an ideal situation from the standpoint of the socialist project. Agents in the capitalist society may not wish to obtain the goods on offer. If they

28 Scarce natural resources are generally depletable natural resources. In the long run, products requiring depletable resources must either be replaced with other products or else some substitute for the resources needs to be developed. But neither of those options may be feasible in the short-to-medium term.

are willing to acquire them, that does not necessarily mean bargaining power will be symmetrical. If the scarce natural resources are needed in the socialist sphere far more than their trading partners need the goods being offered them the latter will likely know this to be the case, and offer very disadvantageous terms of trade. Further, so long as this situation persists, so too does the threat that capitalist powers will withdraw the needed resources to weaken or even undermine the socialist project.

In some cases, at least, it will prove better to simply do without products or resources until substitutes can be found, or until an area with a natural resource in question joins the socialist alliance. But here too attempts to anticipate future contingencies are bound to be limited and inadequate.

8.3 *Geopolitical Conflicts*

A well-functioning international socialism would be extremely attractive to those in parts of the world still subject to the reign of capital, where freedom is at best mostly formal and the full development of so many is systematically thwarted. Many will engage in struggles to institute socialism where they live. The question how socialist regimes should support them has no simple answer. On the one hand, few things are more likely to spur a reactionary nationalist reaction in a population than foreign intervention in its affairs. On the other hand, solidarity with struggles for emancipation seems incompatible with watching passively as those struggling are repressed or slaughtered.

Over time we can hope that the attractions of socialist internationalism are so strong that non-socialist regimes are forced to acknowledge a right to undertake a peaceful transition away from the reign of capital and the capitalist state. Prior to that point, however, we must accept that it is impossible to state a general rule here. 'Aid others in their emancipatory struggles unless it can be reasonably foreseen that this would make matters worse' is close to useless as a guide for action. But it may be the most that can be said. Only practical judgments suited to specific contexts can go further.

In any plausible model of socialism something like a Division of the Public Safety Agency discussed above must provide security from harms inflicted by foreign powers, with close coordination between the national Public Safety Agencies and the international Agency. Such harms are most easily inflicted when a foreign power has strong domestic allies. In a newly socialist society members of the deposed capitalist class are natural allies of foreign powers trying to restore capitalism, and any residual economic power its members have will likely be used to foster chaos. This is a powerful reason to not delay the transitions from capitalist units of production to self-governing Worker Collectives and from the system of private investment to socialised investments.

It is important as well to abolish the old currency and the domestic circulation of foreign currencies (especially those controlled by regimes hostile to the socialist project) quickly. The units of account created by the Social Transaction Centre and allocated by Social Investment Centres must be the only effective means of exchange. Otherwise, those with extensive concentrations of monetary holdings have the power to impose massive social disruptions. They have an incentive to use that power, hoping ensuing chaos will delegitimise the socialist project and encourage foreign interventions restoring the system benefitting them so much.

It would be naïve to suppose that such measures will be sufficient to end all military threats. Only a few very general observations regarding the role of the military in a socialist republic can be made here.

* The single most important component of a socialist defence is a citizenry extensively trained in civil disobedience.

Potentially intervening regimes must understand that any occupying force would face immense and continuous resistance, imposing high costs on them indefinitely.

* Military forces must be compatible with socialist principles. The object of military training must not be to transform citizens into killing machines.

Enemy forces must not be demonised. A sense of solidarity with foreign populations of opposing regions must be maintained.

* Solidarity within the socialist world must also be expressed.

An attack on one is an attack on all and should be met with an internationalist response coordinated by the international Agency for Public Safety.

* Military forces must be democratised.

In 'normal' peacetime circumstances, the principle that authority should be exercised subject to the consent of those over whom it is exercised applies here no less than in any other social organisation in socialism. Those holding positions of authority in a military chain of command are elected by those below them for limited terms and subjected to review and possible recall in the period between elections.

* Civilian oversight in socialism must be instituted in a far more comprehensive fashion than ever before in world history.

This implies that the Democratic Assemblies must have the power to oversee the workings of every part of the chain of command. In the model here its members collectively have the right to approve those elected to positions of military authority, countering any tendency for leadership to become autonomous from citizen control. If someone significantly abuses their authority or fails to use it to further the social responsibilities assigned to them effectively, if they are not recalled by the members of the military Collective themselves, in our model of republican socialism the Democratic Assembly has the power to remove those holding positions of authority with a vote of no confidence. Stringent international judicial overview committed to punishing infringements of international law (which will surely be greatly strengthened by the international Democratic Assembly) is also required.

* In moments of imminent threat or actual conflict from a foreign power seeking to undermine the socialist project, democratic values are best furthered by an effective defence against threats and a successful implementation of strategies and tactics in conflicts.

While democratic institutions and practices are at the heart of the socialist model, 'democracy' does not necessarily demand the same institutional rules and the same sort of behaviour in every social context.²⁹ Decisions that must be quickly made in emergencies are not matters for extensive deliberation. For the duration of an imminent extreme threat or actual hostilities, democratic procedures must be put out of play temporarily. Engaging in an extended period of deliberation and critical assessment – the very heart of a socialist society in normal circumstances – would be tragically inappropriate when delays in action might mean defeat of the socialist project.

29 This point has a more general relevance. It applies, for example to the relationship between adults with responsibility for a child and the child. Democratic values are best furthered by effective socialisation of children so that when they reach maturity, they have the capacity to make informed and responsible decisions for themselves when appropriate and to participate as an equal in collective decision-making when the social good is at stake. To get to that condition, however, young children cannot always do whatever they want whenever they want. The relationship between parents, care givers, and teachers, on the one hand, and children, on the other, is asymmetrical. Pretending that it isn't does not further democratic values in the long run. (Needless to say, neither are democratic values furthered by authoritarian parenting and pedagogical practices.)

* The principle of subsidiarity must also be significantly qualified in times of emergency.

While it will often be the case that many decisions regarding (short-to-medium-term) strategies and tactics should be left to the discretion of local forces, there are other circumstances when protecting the society is better served by limiting the discretion of local forces in order to implement a coherent medium-to-long-term defence plan for the society as a whole. In the latter cases, the creative intelligence and the tacit and local knowledge of local forces must still be mobilised to implement the objectives assigned to them in ways suited to contingent concrete contexts.

* The appropriate level of military funding must be proportional to a reasonable estimation of threats and of the most effective ways of dealing with them.

This is not the case in the leading capitalist power, where the military industrial complex Eisenhower warned of has a powerful private interest in exaggerating threats and exaggerating the effectiveness of expensive weapons systems in meeting them. It also possesses powerful political means to further that interest. No sector has been more harmful to the environment. The record of bureaucratic command economies, where control over an expansive military sector increased the domestic power and international prestige of ruling elites, does not provide a compelling alternative.

In the model of socialism presented here, the solidarity constraints make it transparent that the higher the percentage of social resources directed to the military sector (addressing a special sort of universal₁ need), the less remains for sectors addressing other social needs. And the more damage done to the environment by the military sector, the smaller the environmental footnote from other human activities can be.

There is no one correct way to divide investment between military and non-military sectors. Nonetheless, some decision must be taken. In republican socialism those who directly bear the risks when too little is devoted to military preparedness, and the costs when too much, participate directly and substantively in the decision-making process.³⁰ Decisions in retrospect may prove to

30 When national- and international-level Community Associations and Democratic Assemblies propose a plan for priorities of social investment that is then affirmed in a public referendum (perhaps after modification), that includes the percentage of the national and international budgets devoted to the military sector.

have been mistaken. But there are good reasons to think they will systematically tend to be more reasonable than those in capitalism, or any other alternative system.

9 Conclusion

The present chapter brought to completion the presentation of the institutional framework and system of social practices defining the core of 'the realm of necessity' in the model of republican socialism proposed in this book. After introductory remarks regarding the need for national and international levels of the model (Section 1), Section 2 showed how the essential determinations of production for social needs defining the local and regional levels of the model could be transposed to the national and international levels. Special attention was then given to describing how investment decisions across levels could be coordinated by having planning periods on the various levels overlap rather than coincide (Section 3). Section 4 considered two objections to the actualising the first solidarity constraint across national borders. Section 5 turned to the important roles of national and international Democratic Assemblies in the model, such as the establishment and oversight of specific Agencies charged with furthering specific aspects of 'the full and free development of every individual'. The most important of these Agencies were discussed in Section 6. Section 7 considered the national and international innovation systems that are necessary preconditions for the innovative dynamism of socialism. The crucial role of science and technology juries was highlighted. Section 8 then turned to the fraught relationship between the areas of the globe instituting republican socialism and national territories still governed by the imperatives of capital. In specific, socialist environmental policy, trade policy, and geopolitical conflicts were briefly considered.

The final stage in the presentation of the model of socialism endorsed in this book is the 'realm of freedom' beyond what is strictly speaking necessary for the social reproduction of a solidarity society based on self-governance without domination and social production for social needs. Before turning to this last dimension of the model, however, some of the most important objections against the model's description of a socialist 'realm of necessity' should be considered.

Incentives and Efficiency in the Socialist Model

Making use of a distinction made by Marx, Chapters 5–9 have outlined a ‘realm of necessity’ in the republican socialism defended in this work. (The corresponding ‘realm of freedom’ is the topic of Chapter 11.) The present chapter is devoted to objections very likely to be raised against the features of the model presented in these chapters. Some of these objections have been considered already. Their importance justifies more extensive discussion.

A first objection is obvious: many important topics have been omitted. There has, for example, been no discussion of how the education system of a socialist society might differ from what we find today, or how cultural production and diffusion might be transformed in socialism, or how the social categories of race and gender will or will not play a role in society, or whether there are intrinsically socialist practices of child-rearing, urban design, etc. The role of the judicial system in republican socialism has been mentioned, but not examined in anything like the depth it warrants. The list could be greatly lengthened.

Some omissions may be justified on the grounds that they are secondary matters, or because little can be said at this point in time. The neglect of others cannot be dismissed so easily. The success of the socialist project depends on successfully meeting its major challenges. Anticipating how they might be addressed as comprehensively as possible is vital for a defence of socialism today, however contestable and revisable the anticipations might be. The only mitigating factor for the omissions is that no one book can include everything.

Turning to what has been presented above, many readers are likely to question whether social agents would have sufficient incentives to do what the model calls on them to do. The closely related question whether the model would be plagued by inefficiencies must also be confronted. Section 1 considers incentive objections, Section 2 issues of efficiency.

1 Incentive Objections

I strongly agree with Mike Lebowitz’s insistence that we must always keep in mind the ‘second product’ of socialism: in the process of social agents transforming society, the social agents are themselves transformed. In the process of

building a society based on association rather than competition, we can expect an ethos of solidarity to strengthen while the drive to 'look out for number one' fostered by capitalism weakens. Nonetheless, previous attempts to create a 'New Man' (*sic*) have failed. What reason is there to think some new attempt will succeed? Historical materialists cannot rely on moralist appeals to solidarity being sufficient for social agents to act in the ways described in the model. The question whether inadequate incentives doom the socialist project must be faced and not dismissed with slogans, no matter how inspiring they might be.

Four variants of the incentive objection will be considered here.

1.1 *Are There Sufficient Incentives to Labour?*

In slave and feudal societies, slaves and serfs were forced to contribute necessary labour by the personal domination of the master and or the lord, with its ever-present threat of violence. In the capitalist era, supposedly 'free' wage labourers are coerced to contribute (indirectly) social labour by the impersonal domination of capital, with its ever-present threat of lack of access to adequate means of subsistence for themselves and their dependents. Socially necessary work is as *necessary* for social reproduction in socialism as it is in slave societies, feudalism, or capitalism. Won't socialism also require some mechanism of coercion to ensure that it is undertaken to a sufficient extent?

The personal domination found in slavery and feudalism has no place in republican socialism. The impersonal domination of capital is also absent. The universal₁ needs all individuals have as members of (local, regional, national, and global) communities and the universal₂ needs all have as individual embodied agents are both met unconditionally. Access to universal₁ or universal₂ goods does not depend on how much social labour a specific individual has performed, or even whether any has been performed at all. This may overcome the coercion of other production relations. But does that come at the cost of risking social collapse from an insufficient number of people engaging in socially necessary work? Where are the incentives to labour that would alleviate this risk?

A first – admittedly inadequate – response is to consider the problem in comparative terms. Surely the problem of incentives is much worse in a society where bad jobs with low pay are a normal state of affairs even when such jobs could be automated away, redesigned to mobilise the creative intelligence of those undertaking them, or shared as a relatively small part of every position in the workplace. In republican socialism, the social relations of the workplace generate a dominant tendency for all three paths to be pursued simultaneously and aggressively. It is also reasonable to assume that the problem of providing

incentives to work is much greater in a society where advances in labour productivity have little if any impact on the length of the workday, in comparison to a social framework where such advances tend to directly reduce the time that is spent in formally organised workplaces. There are also good reasons to think that a workplace where workers are truly empowered would be a place where social relations are nurtured, capacities developed, creativity mobilised, and the sense of self-esteem from contributing to the good of society is internalised, making the workplace an inherently attractive place to spend a part of one's day.

The model of socialism presented here, however, does not rely on such considerations. The risk of social collapse from insufficient incentives to contribute social labour is far too high. The risk is made negligible in the model by means of a straightforward material incentive directly appealing to individuals' self-interest. The provision of universal goods is not sufficient for most people to live the sort of lives they wish to live. Particular goods are required. (You cannot be a guitarist without a guitar.) Providing social labour within formally organised Worker Collectives is the way most people most of the time obtain the income required to gain access to particular goods that aid (or may be necessary for) the pursuit of particular interests.¹

This response to the incentive problem would threaten to undermine republican socialism only if 1) there were not sufficient numbers of social agents who care about pursuing particular ends, or 2) there were not sufficient numbers of agents whose particular life plans require particular goods. 1) can be immediately dismissed. Individual social agents lacking particular desires or goals are a fantasy of science fiction. 2) may cover some real cases – ascetic mystics, I suppose, can live their conception of the good life in the absence of particular goods. Such cases are far too exceptional to be relevant here.

Besides the ongoing need for socially necessary labour within formal organisations (Production Collectives), there is also the care labour socially necessary for social reproduction undertaken outside formal organisations. In previous social formations this form of socially necessary labour was predominantly undertaken by women. It is fully justified to categorise this labour as having generally been coerced, forced upon women without appropriate social recognition or reward, whether by overt patriarchal violence, religious dogmas, or the dead weight of customary gender roles.² Coercion remains an applicable

1 One other way: the grants and rewards can be offered to participants in commons-based peer production projects of special social priority, as discussed in the next chapter.

2 Coercion remains an appropriate category even when women's preferences adapt to their

category even after we acknowledge that many forms of care labour can be intrinsically rewarding (nurturing the young, caring for those who are infirm, and so on). Coercion comes into play when the need to provide care is assigned to some group by withdrawing their access to other paths, when care labour is not properly socially acknowledged or respected, when undertaking it puts an individual or group socially subordinate to some other individual or group, or when undertaking it comes at the cost of undermining the 'full and free development' of their capabilities.

None of these conditions is systematically reproduced in republican socialism. For the first time in world history, care labour will be truly freely chosen. While the ethos of a solidarity society will create a generalised disposition to undertake care of others for at least a part of one's life (just as one benefits from the care of others at crucial moments in one's own life), those who have no wish to undertake it are not forced to do so. The ample presence of Worker Collectives providing day care, care for the infirm, home care, and so on – universal₂ goods addressing universal₂ needs, whose provision is an essential core of the socialist project – removes the coercive element from care provision. So too does the explicit acknowledgement of the importance of care labour as an essential form of socially necessary labour in the material practices of a socialist society; full-time care givers in households receive the average income that members of Worker Collectives receive for contributing socially necessary labour in formally organised workplaces. Finally, the care labour so necessary to society exemplifies freedom in necessity when the choice to provide care labour in a household for a period of one's life does not effectively destroy other options. A socialist politics of time includes rights to regular sabbaticals from the workplace, providing opportunities to learn new fields and have different experiences. Caring for a child or an elderly member of the household would be a special sort of sabbatical. When a person comes back to a workplace, the social world is enriched by what they have learned and experienced during their absence, even if what they have learned and experienced has no direct applications in their occupation.

In summary, in republican socialism the combination of guaranteed access to universal₁ and universal₂ goods and the need for social income for access to particular goods maintains a dynamic balance incorporating both freedom from coercion and incentives for social individuals to undertake the work socially necessary for social reproduction.

limited options in the given circumstances. See the important discussion of adaptive preferences in Nussbaum 2001.

1.2 *Are There Sufficient Incentives to Exert Effort?*

It is one thing to join a Production Collective and agree to participate in its life in return for an income to acquire particular goods. It is quite another to be fully engaged as one does so. Does the form of socialism defended here provide adequate incentives for working with a reasonable level of effort and care, for doing one's fair share of the tasks that need to be done? Or would it necessarily tend to disintegrate due to the number of people attempting to 'free ride' on the efforts of co-workers?

In capitalism, the carrot of higher wages and possible promotions, combined with the stick of low wages, the threat of unemployment, and systematic management surveillance, have usually been sufficient to extract effort and keep free riding in check.

In contrast, the central planning of command economies to a significant extent removed the threat of unemployment and blunted the hope for higher wages and promotions. This resulted in a systematic tendency to motivation deficits, one of the many factors contributing to a strong tendency to under-production. Wouldn't republican socialism be similar in relevant respects? Employment is offered to all, and so the threat of unemployment cannot be used as an all-purpose weapon by management (and certainly not when managers are agents of the workforce). Also, the rewards for individual effort are severely constrained relative to the differentials allowed in capitalism. What would prevent a critical mass of workers from deciding it is in their self-interest to shirk and let other pick up the slack?

In this context a 'critical mass' need not be all that many to cause serious difficulties. Those who are not themselves initially disposed to free ride do not want to be suckers. Rather than continually pick up the slack for the slackers, many are likely to conclude it is unfair for them to work harder than others do. Sooner rather than later, won't motivational issues arise here too on a macro scale? If generalised shirking dooms the socialist project, defenders of the invisible hand would have the last word: a system aiming at private gains would indeed be ultimately more effective at addressing social needs than one taking social needs as the direct goal of production.

Some replies to this objection regarding effort levels echo responses to the incentive question regarding joining workplaces in the first place.

* The problem of shirking can be expected to be most pressing with rote jobs that involve high levels of physical exertion, risk, and psychological stress. In capitalism these are typically low-paid jobs, and investing in expensive technologies to automate them would reduce profits. In socialism, however, the tendency to automate them would be much stronger, eliminating jobs where the tendency to shirk is strongest.

* Some jobs that are rote, or require high levels of physical exertion, or involve considerable risk and psychological stress cannot be automated. But they can be redesigned or rotated. Both will occur in socialism far more than is the case in capitalism. The more this is the case, the less those undertaking them will be disposed to shirk.

Other responses bring into play empirical studies of workplaces analogous to those of republican socialism in some relevant respects:

* The study of cooperatives has given us good reason to think that worker control of the production process is itself a strong source of motivation.

* There is ample empirical evidence that high levels of monetary reward are not necessary to motivate effort for tasks where workers' creativity and intelligence are mobilised.

* The evidence of the 'teams' in so-called flexible or lean production suggests that social cooperation generates dispositions to not let co-workers down by shirking. In capitalism this generally takes the form of peer pressure to increase the rate of exploitation through intensifications of the labour process. In self-managed workplaces the benefits of cooperation would not be limited and distorted in this fashion.

To this we can add that republican socialism does not entirely eliminate carrots and sticks. Regarding the latter,

* Production Collectives need not be stuck forever with members who undermine their purpose and projects. There cannot be anything like the power to fire 'at will' so widespread in capitalism. But a Collective is, as the name implies, an association with a collective purpose that undertakes collective projects. In the absence of extenuating circumstances, those whose behaviour is consistently incompatible with that purpose and those projects in effect withdraw from the Collective. Other members have a right to acknowledge that withdrawal and not pretend it hasn't occurred. When they formally withdraw membership (a last resort) they know that those excluded are not socially abandoned. All their universal needs continue to be met. If they want additional income, they are free to request to join another Production Collective. They also have the opportunity to join training programmes for different occupations that might suit them better, or to join an *ad hoc* Collective where less effort is

expected in return for lower-than-average worker income (see Chapter 6, Section 2.3).

The hope is that membership in Collectives will not be withdrawn very often. Activist groups and the judicial system must ensure that it does not take place for frivolous or discriminatory reasons. But it is important that there is a way to prevent persistent slacking from spreading to those who do not want to be suckers. Ultimately, the decision how to treat incorrigible slackers is left to co-workers, who have strong motivation to address problems before they fester. In our model no Production Collective has a right to continual social investment regardless of its contribution to addressing social needs. If a strong majority of the members of a Collective wish it to remain in operation – if they wish to avoid the disruption to themselves and their households that would come from having to find a position in a different Collective in perhaps a different community, or have to retrain for a different sector – they have a strong incentive to address slacking well before it threatens the continued social funding of the enterprise.

Most of the time a word on the side with someone who may be trying to get away with not pulling their weight will suffice. But if that is not sufficient, the collective good of the Collective (and, ultimately, of the socialist community as a whole) must trump the private self-interest of members who want the benefits of membership while free riding on the efforts of others.

In the model of socialism defended here, various types of ‘carrots’ can be offered as well. Every Worker Collective divides among its members an aggregate amount equal to the average worker income multiplied by the number of (full time, or full time equivalent) members. This aggregate does not necessarily have to be distributed equally to each member. Perhaps those with greater seniority could receive more income if they are judged to have consistently exerted a ‘satisfactory’ level of effort by their co-workers. Or perhaps income distribution in a Worker Collective could be divided into three main categories corresponding to ‘exceptional’, ‘average’, and ‘below average’ exertion of effort, again as judged by co-workers.³ Or a one-off bonus could be given to those who have worked especially hard in the estimation of their fellow workers. Many other forms of reward could be experimented with.

It is important that republican socialism acknowledge that all forms of socially necessary labour are equal in being socially necessary. Allocating social funds to Worker Collectives for the income of their members in direct proportion to the number of members builds that acknowledgement into the material practices of the society. It is no less important, however, that the intrinsic goal

3 This measure is recommended in Hahnel 2021, pp. 109–17.

of socially necessary labour in a socialist society – the effective addressing of democratically determined social needs – be actualised in material practices as well. The details of how this is done in particular cases can be left open. So long as the social protections guaranteed to all members of Collectives are respected, different Collectives are free to decide for themselves the principles of allocating income to their members. There could be a range from strict equality of distribution to Collectives making use of every acceptable form of rewarding effort and discouraging slacking. As different Collectives experiment with different principles, it might become clear over time that some are more compatible with effective social production than others. Some might lead more potential members willing to exert effort to request to join particular Collectives than others. Or it might become clear that some principles of distribution were more suited to a particular sector than others. Perhaps (as I think likely) a plurality of different principles of distribution would be implemented. The point to make here is simply that we have good reasons to think that maintaining the basic principles of socialism is fully compatible with providing sufficient incentives to avoid slacking, so far as such incentives prove necessary.

I would like to end this sub-section by returning to Lebowitz's concept of the 'second product' in socialism, the transformation of human subjectivity accompanying the social transformations of socialism. However justified concern for incentives is in socialism, it must be combined with an insistence that they will not function as they do in market societies. Three reasons for this can be highlighted here.

First, the individual activities that make up social production are not stand-alone events that can be adequately considered and evaluated in themselves. They are moments of a complex dynamic whole. The labour markets in capitalism, however, generate the illusion that they are separable, along with the corresponding illusion that an individual's monetary return in the market is directly proportional to the worth of that individual's activities. In this social framework low-wage workers experience a systematic devaluing of their contributions. Is it surprising that shirking would occur in the absence of coercive mechanisms? In these circumstances shirking would be a rational response to an irrational social situation, not a manifestation of a transhistorical ('natural') disposition.

In republican socialism the social organisation of the workplace leads individual workers to consider their actions in the context of both their Production Collective and the society as a whole rather than as an isolated 'contribution', making the questions of effort and reward matters of collective import. Social psychology will surely be transformed from what it is when social labour

appears as an aggregate of private choices in response to private incentives, or when disparities encourage a devaluation of the efforts of the poorly remunerated.

A second relevant transformation of subjectivity is no less profound. In capitalism, there are many 'bullshit jobs' that are widely understood as such. Tele-marketers who hustle the susceptible into purchases they do not want to make, sales staff instructed to scare customers into buying overpriced and unneeded warranties, scientists designing duplicate drugs no better than cheaper available alternatives, likely know on some level that what they are doing is bullshit. Then there are all the jobs that would not be needed in a society that systematically devoted its resources to forms of production meeting social needs as determined in free and open deliberation. (Manipulative advertising, for example.) To this we can add jobs that do address real social needs, but only to a very limited extent and only in a very distorted fashion. Slacking makes sense in bullshit jobs, another rational response to an irrational situation. It also makes sense to assert that material incentives are required to overcome that disposition to slack. But if bullshit jobs are eliminated, as they are in the institutional framework presented in previous chapters, a major reason the extensive system of incentives to effort is so needed in capitalism will be eliminated as well.

In a modern complex society, it will not always (and not usually) be possible to know who in particular is made better off by our activity. But the more effective production for social needs is, the more producers will know with a high degree of confidence that their actions have a directly positive effect on other members of their community. It is simply implausible to assume that such a society will have the same degree of incentive problems as a society where bullshit jobs proliferate.

A final way incentive issues will play out differently in republican socialism stems from the way the income of members of Production Collectives is allocated. The aggregate sum is fixed by the average member income multiplied by the number of members. It follows that the more income above the average one member receives as an incentive to exert effort, the more one or more other members must receive below that average. This too will surely affect social psychology. It is plausible to expect that demands for incentives will not be excessive when the effects on co-workers are direct and evident.

The question of an individual's appropriate 'reward' for an individual contribution is not likely to disappear in republican socialism. Incentives must be taken into account in ways outlined above and others as well. But it would be a theoretical mistake to assume dogmatically that the social psychology making the question of incentives so central in capitalism is a transhistorical constant.

1.3 *Are There Sufficient Incentives to Develop Skills?*

Another version of the incentive problem concerns the relationship between the training and skills required in the society, on the one hand, and the training and skills social agents choose to develop, on the other. In capitalism, higher pay is used to attract people into fields where investors perceive the greatest profit opportunities. Often enough, this leads to worker alienation, with far too many choosing a particular occupation for its expected income rather than its contribution to their 'full and free development'. It is also the case that what capital giveth, capital can taketh away. Highly paid occupations tend to be devalued over time as education and training programmes generate an over-supply of potential candidates with the relevant skills. Or technological innovations may eliminate the need for rare and specialised skills ('deskilling'). Or skills associated with what had been a dynamic sector may become obsolete as that sector loses its centrality in the social division of labour.

That said, there is no denying that in capitalism the prospects of higher income are effective in roughly matching the training and skills social agents choose to develop and the training and skills corporations require. If socialism cannot provide comparably effective incentives, its feasibility would be very much called into question.

A first response is to recall important counterexamples to the assumption that only extrinsic monetary rewards provide sufficient incentives to engage in extensive training and skill acquisition. Most scientific-technological workers are forced as a condition of employment to transfer intellectual property rights in their ideas to their employer. Despite lacking the incentive holders of IPRs have in contemporary capitalism, they are willing to undertake extensive training and develop the skills required for scientific-technological work. Even more strikingly, the accomplishments of open-source projects have already established that individuals will willingly cooperate with each other in projects of mutual interest without monetary incentives.⁴ Self-respect, the respect of peers, the sense of well-being that comes from mobilising creativity and satisfying curiosity, and other intrinsic motivators are tremendously effective incentives. The experience of Cuba shows that when higher skills are required for occupations that clearly contribute to meeting social needs (medical doctors, for example), the social respect and self-respect associated with them provides a sufficient incentive.

Those with specialised and scarce skills may also find motivation in socialism from social benefits that do not take the form of additional income. In

4 Benkler 2006.

general, the range of Production Collectives they can request to join with an expectation of being accepted will be wider than for others. This implies that they will in general have greater social mobility, greater options for moving to a new community if and when they wish. (The unequal distribution of such social benefits is unavoidable in a society affirming freedom of occupation. It does not undermine the egalitarian dimension of republican socialism, since these benefits do not grant some social agents unaccountable power over others, or impersonal forces power over all.)

Finally, if it turns out that material incentives in the form of additional income are required to attract social agents into specific occupations, we must recall again that income differences in Worker Collectives are permitted in our model of socialism. The question then becomes whether the income differences are sufficient to be effective as an incentive. If there were a significant difference over the long term in levels of labour productivity in capitalism between countries with relatively high-income differences (for example, the US and the UK) and countries with relatively low-income differences (Germany and Japan, say) this would be the basis for a significant objection to socialism. But there isn't, and it's not.

This does not mean that there will always be a perfect fit in socialism between the skills individuals have and the skills needed for the society to flourish. But there is no perfect fit in capitalism or any other system either. We live a society today that provides vast incentives for individuals to develop the skills required for a ludicrously metastasised financial sector, ignoring the overwhelmingly evident social need to mobilise collective creative intelligence to address environmental challenges on a vastly expanded scale. Defenders of the distorted incentives of this society are hardly in a position to pose a convincing incentive objection to socialism. The fit between the skills developed in socialism and those required to address social needs determined to have the greatest priority in free and open democratic deliberation will not be perfect. But it will be very close, and that is good enough.

1.4 *Are There Sufficient Incentives to Accept Positions of Authority and Not Abuse the Power Associated with Those Positions?*

In the model of republican socialism developed in this work, some social agents have the authority to make decisions affecting others. In all cases they are accountable to those over whom the authority is exercised. That does not remove the special responsibilities they have, whether we are talking about members of institutions of socialist self-governance (Democratic Assemblies, Community Agencies, Sector Agencies, Production Review Boards, Social Investment Centres, the Agencies established to oversee the provision of public

goods, the socialist Judicial System, or Social Transaction Centres) or those elected to serve as managers or members of the Workers' Council of a Production Collective. What incentive do social agents have to accept the special responsibilities associated with these positions? Most members of institutions of socialist self-governance receive only average workers' income. Those elected to lead them or to serve as managers or members of the Council of a Production Collective might receive somewhat more if co-workers agreed. But nothing like the material rewards offered to their counterparts in capitalism is on offer. Are the material incentives to hold positions of authority inadequate?

I see no reason to devote much discussion to this issue. We have just noted that there is compelling evidence that the intrinsic motivation of having an occupation that mobilises creative intelligence and wins social respect is sufficient incentive for sufficient numbers of people to acquire the training and skills demanded by that occupation. Similarly, the opportunity to mobilise creative intelligence and win social respect in positions of authority will be sufficient incentive for sufficient numbers of people to accept such positions.

The more important question, I think, is what incentive those exercising authority have to not abuse their authority. What prevents their placing self-interest before the social good, as those holding positions of social power have done throughout history?

Perhaps the most important point to make in response is that the degree incentives to avoid corruption are required is a function of both the opportunities to engage in corruption and the anticipated rewards from doing so. Both are minimal in republican socialism. All income flows are created by the Social Transaction Centre whose branches track the allocations of Social Investment Centres and the expenditures of Production Collectives and their members. All accounts of income flows are transparent matters of public record.⁵ Income cannot suddenly appear in the account of a member of an institution of socialist self-governance as a result of some deal shielded from public scrutiny.

A second point concerns the selection mechanism for holding positions of authority in republican socialism. In some cases, those holding positions are directly elected and subject to recall. The history of corruption in capitalist states shows that the mechanisms of formal democracy all too often provide all too ineffectual incentives to avoid corruption when monetary resources can be accumulated without public scrutiny. When that is not possible, however, the

5 This does not imply that there is public knowledge of the particular persons associated with these flows.

effectiveness of democratic mechanisms in electing representatives who are not corrupt, and in recalling those who are, will be tremendously increased.

In other cases, those holding positions are randomly selected from groups nominated by co-workers. The judgements of co-workers are certainly not infallible. But we can assume they do not want important decisions directly affecting their lives and the lives of those they care deeply about to be made by those who do not take their responsibilities seriously or are prone to abuse their social power. Co-workers, then, have a strong incentive to nominate those with the disposition, background knowledge, experience, and willingness to learn, required to fulfil the social responsibilities assigned to members of these special Collectives. The need for additional incentives to avoid corruption is thereby greatly lessened.

A third relevant consideration here is the role of *socialist pluralism* in avoiding incentive problems. In republican socialism it is not the case that everyone decides about everything. Just as it is important that the citizens participating in socialist civil society are not overburdened by unreasonable demands on their time, effort, or knowledge, it is important that those in positions of authority are not overburdened. The different institutions and associations of socialist self-governance have their own assigned tasks. The members of a Community Association, for example, are asked to make informed judgements about the social needs of their community. They do not have to evaluate the extent particular Production Collectives effectively address social needs relative to other Production Collectives operating in their sectors; that is a matter for Sector Agencies. Sector Agencies analogously are not required to develop the competence Community Associations need to possess to make informed judgements regarding the quality of life in particular places. The managers and Worker Councils of Production Collectives similarly have a particular focus. But while different Agencies, Associations, Assemblies, Production Collectives, and so on have specialised tasks, they share overlapping concerns.

The framework that avoids overburdening sites where authority is exercised simultaneously discourages corruption in the exercise of authority. Suppose a Sector Agency, putting the self-interest of enterprises in the sector it represents before other motivations, lobbies Social Investment Centres to fund those enterprises more than a more impartial assessment would justify, at the cost of underinvestment in other sectors that would better address social needs. Sooner – much sooner! – rather than later the members of other Sector Agencies, Community Activist Groups and Community Associations would either realise something had gone wrong or be alerted by those whose needs were being neglected that this was the case. Social Investment Centres must docu-

ment the reasoning underlying their allocations, and those documents are a matter of public record. If a plausible case can be made that the reasoning was flawed, members of Democratic Assemblies charged with overseeing the social investment process can call Centres to account. If their allocations were reasonable in light of the assessments provided them by Sector Agencies, but those assessments were based on a distorted (or in extreme cases, deceptive) account of the capabilities of enterprises in their sectors, that too would become clear relatively quickly.

Hopefully matters would rarely reach this point, since Social Investment Centres would not make allocation decisions solely on the basis of recommendations by Sector Agencies. Knowing their judgements and the reasoning behind them are overseen by Community Activist Groups, Community Associations, Democratic Assemblies, and the socialist Judicial System provides ample external incentive to not be affected by distorted or deceptive reports by Sector Agencies.

There is no need to show this for every institution in the socialist model, since each case would follow along the lines just sketched. Overlapping reciprocal oversight provides a strong incentive for the members of every institution of socialist self-governance to 'get things right'.

Fourth and finally, corruption in socialism would be subject to legal remedies without the corruption of the legal system by private privilege so pervasive in class societies.

2 Efficiency Objections

It is somewhat arbitrary to treat issues of incentives and efficiency separately. The question of incentives for members of Worker Collectives directly concerns the efficiency of their operation. In this section the issue will be broadened to include questions of efficiency that do not directly involve incentives to social agents.

2.1 *Are There Inefficiencies from Excessive Centralisation?*

A number of issues regarding efficiency arise from the dialectic of centralisation and decentralisation. Too much centralisation and the central authorities necessarily tend to lack sufficient information to propose efficient plans for production. Producers have a strong incentive to game the system by overstating the inputs they need and to understate the output they are capable of producing. Attempting to implement distorted plans then requires a level of *ad hoc* improvisation not conducive to efficient production. The inefficiency

of central planning has a profound negative consequence: units of production can no longer be held responsible for their failures or successes. How can enterprises be sanctioned by central authorities for carrying out the instructions of those same central authorities? Soft budget constraints appear justified in these circumstances, leading to the indefinite survival of inefficient enterprises.

On the other hand, too much decentralisation makes the coordination of production and distribution within and across territories difficult if not impossible. Without adequate coordination production and distribution processes cannot be accomplished efficiently. There is in addition a danger of the society disintegrating into a mere aggregate of externally related territories, bound together by only a weak form of solidarity that weakens further over time.

In our model of socialism, tendencies in both directions are checked. We can begin with the limits to excessive centralisation.

There is no one central authority in the model that makes investment decisions on international, national, regional, and local levels. National or international Investment Centres do not need comprehensive information about the needs and productive capacity of every producer in regions or localities. Decisions about regional and local production to address regional and local needs are made regionally and locally.

Nor do the political authorities allocating investment funds generally determine what specific products are produced, or ever mandate how they are produced. Planning in the model is for the most part indicative planning, rather than comprehensive central planning. The producers themselves formulate both their general plan for production in the coming period and the specific ways it will be implemented. Social Investment Centres merely determine which producers most warrant the social trust that social investment signifies.

Of course, on all levels Social Investment Centres require good information for their allocation decisions to be reasonable. In our model they do not rely solely on information provided by producers. The information provided in requests for funding from producers is complemented with independent assessments from other workers in the given sector (Sector Agencies) and from the area where the producer operates (Producer Review Boards), information about relevant advances in productive capabilities provided by Research Centres, and information about the adequacy of social need provision forwarded by Community Associations and Community Activist Groups. Further, each source of information knows about the work of the other sources, leading each to take the perspective of others into account as they gather and process

the information they transmit. None of these organisations have a reason to provide inaccurate information in their reports. And if they did, it would be quickly noted.⁶

In many, perhaps most, cases there will be a strong consensus regarding the social investments that should be made. In cases where disagreements persist, in many, perhaps most, cases those holding different views will accept that the other views are reasonable. The future, of course, will remain radically uncertain. Mistakes will be made. When they are, they can be corrected during annual reviews (or sooner, if that is required). The important point here is that there is no tendency for those making social investments to generate a systematic tendency to inefficiencies due to a lack of relevant information.

Another potential danger from centralisation concerns the power higher levels have over lower levels. In republican socialism however, there are no central powers able to reward certain communities with extra funds and punish others by refusing to fund them. Allocations on the international level cannot interfere with each nation receiving its per capita share of investment funds for national-level production, and the same holds for national authorities vis-à-vis regions, and regional authorities vis-à-vis localities. But higher-level bodies do have the power to determine how much of the aggregate supply of 'money' (or 'points', if you prefer) are distributed for use on their level and how much remains for distribution to the level(s) below them. If we make the reasonable supposition that efficient production is likely to involve a mix of international, national, regional, and local production, then the power of international

6 Members of these organisations will obviously lack the implicit knowledge found in workplaces. But implicit knowledge refers to particularities, while those making social investments should strive for a more universal perspective, even if claims to universality must always be provisional and revisable. Decisions about social investment in socialism need to incorporate, but go beyond, tacit knowledge. For example, once workplaces have made their decisions regarding the sorts of product lines that they are best suited to produce (based in part on the tacit knowledge of their members), the content of the decision and the reasons why it warrants funding must be expressed in terms that those lacking the relevant tacit knowledge can comprehend. (This holds for requests for funding from capitalist investors no less than requests for funding from a Social Investment Centre in socialism.) The record of a workplace in producing goods of decent quality in decent quantities can also be the object of informed discussion outside the workplace, making use of relevant quantitative and qualitative evidence. (However big a role tacit knowledge played in auto production across the globe in the 1970s, you did not have to have implicit knowledge from working on the shop floor to know that Toyota had figured out how to produce cheaper and more reliable cars than Ford.) Under-emphasising tacit knowledge can justify too much centralisation of investment decisions. It is no less true that overemphasis on tacit knowledge can justify too little centralisation. In my view, the model presented here gets the balance more or less right.

and national-level authorities to funnel investments to producers on their own level while reducing those to lower levels may seem a possible source of systematic inefficiency. (Having all regions and localities utterly dependent on the operations of national and international producers would also reintroduce forms of alienation and power that republican socialism is designed to rule out.)

It is not enough to respond that the pattern of behaviour just described is ruled out because it would contravene the principle of subsidiarity affirmed in the socialist constitution, provoking intervention by the socialist judicial system. That should happen, but relying on mere oughts ought not to be done.⁷ It would be better if the material practices of the society do not generate the problem in the first place. Fortunately, the practices of republican socialism do not.

The higher-level central authorities in question are the members of national and international Democratic Assemblies. They are directly accountable and revocable by those they represent. If almost all production occurred in a few centralised units producing on a massive scale, regional and local needs would tend to not be adequately addressed. As long as the material practices of socialist democracy are in place, regions and localities will generally not elect delegates to national and international Assemblies allowing this to happen and will recall them quickly if they do.

But suppose we do not want to put our faith in representative bodies doing what they ought to do any more than we want to rely on the judicial system as a *deus ex machina* saving us from social ills. At this point we can ask the simple question: whose interest is it in for there to be excessive centralisation? There are no private owners of international and national-level units of production who stand to make profits from expansions. Neither the managers nor other members of Production Collectives on those levels would gain additional income from an expansion of the scope of the Collective's production.

Perhaps it could be argued that members of an expanding international or national-level enterprise would enjoy greater security; the more the society depends upon a relative handful of producers, the more these producers can assume they will receive social funding in the future. This may be the case. Continued funding will be granted when an enterprise 1) effectively mobilises the creative intelligence of its members, 2) produces products that effectively

7 We also cannot assume excessive centralisation would be always ruled out by the additional environmental costs of the transportation that would be required if there were little regional or local production. Perhaps it would. But that would be a contingent rather than systematic resolution of the issue.

address social needs in a reasonably efficient manner, 3) takes advantage of relevant advances generated by the innovation system, and 4) its funding does not come at the cost of withholding funding from other Production Collectives that accomplish 1–3 to a higher degree, all things considered. If international and national-level producers meet these criteria, funding them is hardly evidence of a tendency to inefficiency in the model. What if in the longer term established units of production want to continue funding without fulfilling these criteria? They do not have retained earnings to do this on their own, and there is no class of private investors they can turn to. They must rely on continued social investment from Social Investment Centres. Institutions of socialist self-governance – Community Activist Groups, Community Associations, Sector Agencies, Producer Review Boards, the Democratic Assemblies, the judicial system – represent groups in socialist civil society with a strong material interest in maintaining social efficiency in production for social needs, reinforcing the national and international Social Investment Centres' adherence to the above criteria. Established units of production falling short are given time to improve, with support from Sector Agencies and Research Centres to change product lines, adopt best practices, appropriate product and process innovations, and so on. But if they do not take advantage of the opportunity, they cannot hold the society hostage, so to speak. The socialist innovation system includes research parks where start-up units of production are nurtured. If established units of production are inadequate, other options for social investment addressing the relevant needs are either already available or can be in reasonably short order.

2.2 *Are There Inefficiencies from Excessive Decentralisation?*

In my view, an efficiency objection based on decentralisation in the model has more plausibility than an objection focused on its centralising elements. Supply chains require extensive vertical coordination across local, regional, national, and international levels. Does the extensive decentralisation of the model tend to rule out the level of centralised coordination required for efficient production?

The formation and maintenance of supply chains fundamentally depends on the participating Collectives themselves. That is one level of contingency. Supply chains depend as well on Social Investment Centres providing funding for suppliers and users of their output in the appropriate proportions. That adds another level of contingency. A further contingency is added when we consider that Social Investment Centres on various levels must make investment decisions anticipating the decisions made by Social Investment Centres on other levels. For example, funding for a final producer on the national

level might be provided by a national Investment Centre in anticipation that regional Centres will begin or continue to fund regional suppliers. That anticipation may or may not be fulfilled.

It can be wondered whether the decentralisation of investment decisions in the model makes coordination far too *ad hoc*. Supply chains may be dismantled without adequate replacement, or not established when needed in the first place. In either case the efficiency of the production system is undermined.

A first response is to recall how the determinations of the model encourage the formation and maintenance of effective supply chains. When Production Collectives apply for social funding, their case will be far stronger when other Collectives have proven willing and able to provide the former with production goods they require. The deeper the formal and informal coordination among participants in a supply chain, and the greater the chain's record of success, the more likely requests of the participants for social funding are granted.

The needs of Production Collectives for inputs serving as means of production will almost surely not be accomplished adequately in the first round of allocations on any level, when coordination among Centres is informal. In the second round, however, allocations are made in a formally organised sequence. Each allocation of each Centre must in turn take into account the explicit mandate to address social needs of high priority not yet sufficiently covered. Funding suppliers of needed production goods is clearly a relatively high priority. If for some reason or other an existing supplier fails to warrant renewed social investment, Investment Centres are in effect mandated to fund another to fill in the gap. When the system of Social Investment Centres on each level does this when its turn comes in the overlapping planning periods (described in Chapter 8, Section 3 and Chapter 9, Section 2 above), needed supply chains will be established and maintained over time.

In Michael Lebowitz's projection of how supply chains should be organised in socialism, each Worker Collective in the chain works closely with the Collective(s) providing it with necessary inputs and with the Collective(s) that makes use of its outputs, and,

[a]s a vertically integrated process ... individual units within the complex would not have the option of producing and selling to whomever they want. Rather, it is essential that the producers recognise their interdependence and their responsibility to the final consumers.⁸

8 Lebowitz 2010, p. 142. His example is 'a complex that includes milk production, the processing

The problem here, I think, is that however smoothly the supply chain might be coordinated at some point in time, it is bound to be disrupted over time by changing product and process innovations, changing preferences, changing resource constraints, and other factors. Every Collective in an already established supply chain should be given a reasonable opportunity to adjust to the new situation. Lebowitz appears to assume that the appropriate adjustments will always be made more or less in sync by all enterprises. The model of socialism presented in earlier chapters of the current work actively encourages this result. But it also takes into account the possibility that a Production Collective may simply not be able to adjust to the new context for a variety of reasons. Perhaps members resist the idea that they have to change how they have done things, or simply find themselves unable to make the requisite changes. Does every Collective have the right to continue in operation indefinitely, even if over time its contribution to production for social needs significantly erodes? What if different Production Collectives could accomplish what needs to be accomplished better? why would maintaining that Collective be a greater expression of solidarity than shifting social investment?⁹ Are Kornai's warnings about the dangers of 'soft budget constraints' to be dismissed?¹⁰

In the model developed in previous chapters, if the output of a given Production Collective does not address social needs to the expected extent, this will be reflected immediately in the accounts tracking transactions and in the quantitative and qualitative data collected by Sector Agencies and Community Associations. A Collective in this situation can then mobilise the tacit and local knowledge and other forms of the collective creative intelligence of its members to address social needs better, taking advantage of support provided by the associated Collectives in the chain, the relevant Sector Agency and Research

of milk into milk products and cheese, plastic production for packaging, and a distribution process' (Lebowitz 2010, pp. 141–2).

- 9 Lebowitz himself implies that Kornai's warning should be heeded when he writes '[T]here is considerable evidence that common property in practice has been successfully managed (in terms of efficiency and equity) by communities. ... The key is the existence of communal institutions – formal or informal arrangements by which common property is monitored and *which provide sanctions for the abuse of the common interest by individuals*' (Lebowitz 2010, p. 147, italics added). Why would the point hold for individual agents and not for individual enterprises?
- 10 We should recall once again that members of a Collective denied social funding are not tossed aside like a disposable container. Their universal needs continue to be addressed, and they can receive income to acquire particular good by joining a different Worker Collective or by entering a retraining programme.

Centres specialising in the implementation and diffusion of innovations in the given sector. A strong and growing internalisation of the socialist ethos provides an internal motivation for making improvements quickly; an external motivation is provided by the knowledge that units of production failing to address social needs effectively have no right to continued social investment.

Withdrawing investments may disrupt existing supply chains. But other Production Collectives may be able to step in. And as noted above, the socialist innovation system – including the research parks serving as incubators for new Production Collectives – provide a stream of new production enterprises to fill in the gaps of supply chains as they arise.

This arrangement does not guarantee there will never be occasions when the relations among Production Collectives fail to be adequately coordinated, resulting in a lower level of production for social needs than could in principle have been obtained in the given context. But that is not evidence of the inefficiency of the model. The demand that such occasions be completely ruled out is an abstract utopian demand, irrelevant to a critical assessment of forms of social organisation. In a dynamic world of personal and organisational initiative, open decisions, imperfect information, and innovation perfect coordination in all cases is ruled out from the start. It certainly cannot be attained in market societies, whether capitalist or market socialist.¹¹ Nor can it be attained through centralised state planning by unaccountable elites. And it cannot be attained by a complete decentralisation of decision-making. Changes in production processes, product offerings, and the sorts of goods individuals, households, and communities believe can address their needs most effectively, and so on, will always make existing relations among some units of production out of sync with the new circumstances. If we do not want to suppress initiative, free decisions, or innovations, or deny that information will always be imperfect and the future always uncertain, then flexible, timely, and appropriate responses to shifting circumstances must be the goal, not the quixotic pursuit of continuous perfect coordination.

11 In capitalism, the social power of firms at the centre of global production chains is great enough to force other firms in the chains to make changes those in the centre believe ought to be made in new circumstances, and their scope of operation is wide enough to discard firms and replace them with others when that is thought to be warranted. While these adjustments will never be instantaneous, it could very well be that they have a flexibility and rapidity that cannot be matched. But the ruling purpose of the changes are the profits of the firms at the centre, and not 'efficiency' in the sense that matters in production for social needs.

2.3 *Are There Inefficiencies Due to the Absence of Market Competition and Market Prices?*

One of the most important objections to an alternative to market societies appeals to supposed inefficiencies resulting from the lack of market competition and market prices. Chapter 2 described the way market competition tends to generate a high level of product and process innovation. The case for the efficiency of market societies rests on similar considerations.

'Efficiency' in a broad physical sense is measured by the ratio of outputs to inputs; if the same set of inputs produce more of the same sort of outputs in one case than another, the former is more efficient than the latter. Of course, in most cases different outputs and different inputs are qualitatively incommensurable, making the attempt to add them up and compare ratios problematic, to say the least. Within the framework of mainstream economics, however, this is not an insurmountable problem. Outputs are commodities with money prices. The various categories of commodity inputs (raw materials, partially finished products, capital goods labour) all have money prices. In the price form the qualitatively incommensurate becomes quantitatively commensurate, enabling ratios between the value of outputs and the value of inputs to be calculated and used as a measure of relative efficiency of different producers. The 'capital efficiency' of so-called capital goods can be derived with money prices, as well as the 'efficiency' of labour inputs.¹² Since the number of workers and the number of hours that they work can be easily measured, the ratio between the price of total output and total hours of labour provides another measure of 'labour efficiency'.

A host of complications are involved in calculating these and related ratios.¹³ We do not need to consider them here to formulate an objection to the model of socialism presented in previous chapters. In market societies competition pressures units of production (more specifically, their owners and the managers who are their agents) to make output/input, output/capital goods, and

12 The category 'capital goods' is ideological. A machine is not inherently 'capital'. It does not have that property by its nature. It becomes capital only when it is incorporated as a moment within a capital circuit, and the generalisation of capital circuits is unique to the present historical epoch. Also, it is labour power and not acts of labouring that are purchased as commodities in capitalist market societies. And labour power is no less incorporated as a moment within capital circuits than machines are; in the reified social world of capitalism, variable capital is just as much (or, better, just as little) 'capital' as machinery is.

13 For example, when the cost of machinery changes, does the cost of already purchased machines have to be adjusted or is the historical cost what matters? (The answer: it depends.)

output/labour ratios as high as possible. Since profits are essentially the difference between revenues from the sale of output and costs, that is just another way of saying that profits matter. A profit-driven system, in short, is a system driven to employ inputs efficiently. Defenders of market societies insist that no system that is not profit-driven could possibly be as efficiency-driven. Any alternative would have insuperable difficulties in taking efficiency into account in a systematic manner, lacking the market prices that enable the efficiency of different ways of combining inputs and outputs to be measured and compared.

Any response to this efficiency objection should begin by pointing out that 'efficiency' is not a neutral technical category. As the previous paragraph reveals, in the mainstream framework 'efficiency' is defined in terms of the logic of profits. In other words, it is defined in terms taken from the market societies it supposedly justifies. A contestable particular notion of 'efficiency' is presented as if there were no others.

There are others.

The notion of efficiency relevant to the present work has to do with the effectiveness of social production in addressing social needs. From the standpoint of this notion of efficiency, there are major problems in societies centring on market competition and market prices. The problems have to do with both social production and social needs. Social production in market societies is systematically distorted in the numerous ways, including:

- * Outputs must generally take the commodity form, whether or not social needs could be more effectively addressed if they remained in the commons, freely available for use.
- * Essential dimensions of social production – including the degree workers' creative intelligence is mobilised; the social harms of unemployment; environmental effects, and so on – are treated as externalities that can be ignored (or addressed in contingent and inadequate ways by often unenforced regulations).
- * Contingent market prices may prevent the adoption of technologies that would further social needs. For example, if labour costs are low, technological changes that could lessen time spent in the workplace may not be adopted even when less time in the workplace would contribute to human flourishing more than continuation of the status quo.
- * For reasons presented in Chapters 2 and 3, there are systematic tendencies to overaccumulation crises in market systems that tend to generate

direct and indirect social pathologies, tendencies that have been greatly strengthened in contemporary capitalism. It is arbitrary and biased to exclude such tendencies when discussing 'efficiency'.

This list is not meant to be comprehensive. Neither is the list of shortcomings with respect to social needs:

- * Needs taking the form of needs for commodities are systematically prioritised, when other needs may have far more importance for enriching the lived experience of individuals and communities.

- * Even when needs do take the social form of needs for commodities, they generally count only when sufficient purchasing power is available to acquire them.

However convincing these points are, a critique of market societies is not equivalent to a defence of an alternative. Showing that a system of market competition and market prices does not result in social production that effectively addresses social needs in important respects is not the same as showing that an alternative could do any better in the absence of market competition and market prices. A positive case for the efficiency of socialism must be made.

Regarding the lack of market competition, a positive response can begin by stressing the role of competition by Production Collectives to obtain social funding in our model. As noted above, units of production in this version of socialism do not have a right to perpetual social funding regardless of their effectiveness in addressing social needs. Ineffective units of production that fail to show improvements despite ample opportunity and support to do so cannot rely on personal networks to continue operating. Crony socialism is ruled out by the variety of institutions of socialist self-governance, all accountable to communities (and Community Activist Groups) with strong material interests in ensuring they carry out their mandates. Also, the per capita share of investment and the human environmental footprint of local, regional, and national communities and the international community as a whole is limited in the model. The result of these solidarity constraints is a strong tendency for agents in socialist civil society to insist that only enterprises addressing social needs effectively warrant social funding; failing to apply that rule directly results in fewer of their needs being addressed than could be. The alien impersonal force of market competition is not in play, making capitalist efficiency utterly irrelevant. But the social force of a collectively shared social goal brings about a superior form of efficiency.

A critic of the socialist project would likely complain that this response ignores the main point of the objection. Inputs into production, and the outputs of production, are for the most part qualitatively incommensurable. In the absence of market prices how can the relative efficiency of producing different sorts of outputs with different sorts of inputs be measured? And if relative efficiency cannot be measured, how can it play a role in social life?

A defence of republican socialism against this complaint stands on solid ground. *All* production in republican socialism must meet a high bar of relative efficiency with respect to a number of the most significant social costs of production. The *opportunity costs* are low relative to those of other systems of production in that allocations of social investment explicitly track democratically determined social priorities. The *environmental costs* are low relative to other systems of production in that allocations of social investment must conform to the second solidarity constraint. Every community must leave an environmental footprint no greater than its per capita share of a footprint compatible with maintaining planetary conditions conducive to human flourishing. Social Investment Centres accountable to a community cannot allocate funds to units of production imposing excessive environmental costs. *Costs to workers* from working in a Production Collective are low relative to other systems of production in that decisions affecting workplace safety, the quality of jobs, and so on, are either made by the workforce as a whole or by managers or a Workers' Council directly accountable to the workforce. A safe workplace mobilising the creative intelligence of the workforce is an absolutely central social need.¹⁴

Relative efficiency within a system of production, of course, matters as well as relative efficiency across different systems. In other words, the process of acquiring goods in a given social framework must take into account their relative costs. If the opportunity costs, or environmental costs, or costs in terms of the time spent in production, of a particular product is higher or lower than one that could substitute for it, a social order where these differences did not matter could be rightly condemned 'inefficient'. In the model presented here, however, such differences matter.

In Chapter 7 considerable space was devoted to showing how 'money' (or quasi-money, or points) and 'prices' in the model developed in this work are

14 While it does not directly concern efficiency, it is worth noting that the competitive pressures of market socialism can be foreseen to significantly weaken the positive consequences of workplace democracy. There is a necessary tendency for them to be eroded by self-exploitation. This is not a danger when market competition is absent, replaced with competition for social investment to meet social needs.

disanalogous in extremely important ways to the money and prices of market societies. It should be obvious, however, that they are analogous in some ways as well. Production Collectives gain access to the inputs they require in transactions shifting units of account allocated to them to the accounts of their suppliers. Consumption goods are acquired in the same way, with income allocated to social individuals and community agencies subtracted from their accounts and simultaneously added to those of producers of means of consumption. The relationship between the social investment in a unit of production in a given period and the units of account transferred to it from these types of transactions are a measure of the efficiency of its social production for social needs, just as the relationship between M and M' is a measure of capital's 'efficiency'.

Profound disanalogies remain. The goal of a unit of production in socialism is to provide the goods needed in the society at unit cost. Success is measured by how close its account nets to zero at the end of a period, with the social costs of its production matching the expenditures of those acquiring its products. Since the cost of acquisition is the cost of production, a positive balance does not represent its profits. A negative balance serves as a signal to the Production Collective that it must do better at producing what people want at a cost they are willing to accept. It is, in other words, a signal that the relative opportunity costs were too high. If a significant negative balance persists over time, it serves as a signal to Social Investment Centres that the Production Collective may not warrant further social investment. The internal motivation of members of Social Investment Centres, the transparency of reasoning underlying their investment decisions, the oversight of other institutions of socialist self-governance such as Community Activist Groups and Democratic Assemblies, the constitutional imperative and its actuality in the operation of the Social Transaction Centre and its branches, all ensure that the allocations of the Social Investments Centres necessarily tend to avoid the soft budget constraints that condemn societies to widespread inefficiency in production.

Other relative costs – environmental costs, the time that must be devoted to the necessary labour for social reproduction – are reflected in the 'prices' of goods in the socialist model. There are two questions to consider here. First, assuming that there is a way to fix these relative social costs reasonably accurately, are there reasons to fear that social agents would instead act in a way that distorted the costs (and therefore the prices) of the output? Second, is there in fact a way to fix these relative social costs reasonably accurately without making use of the market prices of market societies?

Regarding the first question, the income of members of Production Collectives is not affected by the sum of 'money' used to acquire the Collective's output. Their income is instead determined by average worker income set by

the international Democratic Assembly, the allocations of Social Investment Centres, and the intra-enterprise distribution of their Collective's aggregate income as democratically decided by the members of the Collective. No one has any motivation to distort costs and prices, since no additional income can be gained.

Might costs be distorted by excessive use of means of production or excessive numbers of members in a Production Collective, relative to what is feasible in the given context? The important consideration here is that Production Collectives are integrated within the broader system of social production for social needs. If a particular Collective were for any reason to consistently overinvest in fixed means of production (lowering the ratio of outputs to inputs), that would come to the attention of Sector Agencies so long as there were comparable Production Collectives operating in the sector in any part of the socialist world that avoided such overinvestment (having a higher output/input ratio as a result). A Sector Agency would then provide feedback to Collectives that their estimate of the social funds needed for them to acquire fixed means of production were too high relative to best practices. If the Collectives ignored that feedback, the Sector Agencies would share their assessments and the reasoning behind them with the relevant Social Investment Centres. Unless the Production Collectives could make a convincing case that the Sector Agencies were mistaken, the Investment Centres would be disposed to decline funding for excessive amounts of fixed means of production.

In the unlikely case that all other Production Collectives in the sector also proposed overinvestment in fixed means of production, the Research Centres most closely connected to the given sector are in continual communication with the appropriate Sector Agency, informing it of innovations in fixed means of production that could be implemented in the short term. The Agency would nudge Production Collectives to take advantage of that development (offering its extensive support in doing so). If the Collectives refused, they would have to make a strong case justifying that refusal to Social Investment Centres or risk losing social funding.¹⁵

15 Readers familiar with the socialist calculation debate might be surprised at the relative paucity of discussion of investment in fixed means of production. The Austrian critics of socialism placed great weight on the need for market prices if rational decisions are to be made regarding this category of investment. The argument has plausibility in a context where private investors need to consider the relationship between their costs (which in the case of long-term production goods like machinery systems generally tie up considerable amounts of investment funds before any returns begin and may involve taking on significant debt), the eventual returns they anticipate being able to appropriate, and the risk that unforeseen occurrences will prevent their anticipations from being fulfilled.

These same considerations are relevant to the number of members engaged in social labour within Production Collectives. If numbers in some enterprises are out of line with what is the case in others, feedback from Sector Agencies and the social investment process would combine to make the scale of membership consistent with the efficiency of operation. If all Collectives in a sector have too many or too few members from the standpoint of what would be possible given the innovations generated by Research Centres, that too would be known. The social investment process going forward would systematically select for those Collectives willing to adopt a scale of membership reflecting efficiency of operations.

The socialist politics of time is relevant here as well. Reducing the amount of time that must be spent in the 'realm of necessity' of formally organised production is a core element of the socialist project. When productivity advances

In the socialised investment process proposed here, matters are more straightforward: If a strong case can be made that a Production Collective producing means of production that will eventually help address social needs more effectively than alternative investments, that Collective can expect social funding to be provided, even if the (some, many, or even all) benefits will arrive only after the conclusion of the coming five-year period. The society as a whole in effect offers 'credit' to producers that is then 'repaid' with the production of means of production that eventually help address social needs. It is important to take into account the social costs of this production, to track the degree anticipated social benefits are delivered, and to learn any lessons for future allocations that need to be learned. It is not only the case that a market society is not needed for these things to happen with respect to long-lasting production goods. Market societies make it more difficult to accomplish them. There is a systematic bias for investments with a short time horizon imposed by the relentless pressure to capital accumulation. Almost three quarters of chief financial officers have reported rejecting profitable investment projects because the expected positive returns were too far into the future (Graham, Harvey, and Rajgopal 2005). The most recent studies document a decline in corporate time horizons (see He, Pollock, and FCLTGlobal 2023). There is no systematic bias one way or the other in socialism, no need to lure investors with the enticement of artificially inflated profits from the accounting fictions of accelerated depreciation allowances. It should go without saying that social investments cannot overlook the social needs of the present and the near future. But the time horizon of Community Activist Groups, Community Associations, Democratic Assemblies, Public Forums, Worker Collectives, Research Centres, is not systematically and artificially compressed, as it is for capitalist investors. This makes the institutions of socialist self-governance in socialism far better able represent the interests of future generations, as the second solidarity constraint mandates. Other features of republican socialism take the full and free development of future generations into account as well, specifically the regional and national innovation systems described in previous chapters and the percentage of social investment funds set aside for investing in start-up Production Collectives specialising in innovative products promising to contribute to well-being in the future.

occur and there is a general consensus that the 'full and free development of every individual' would be advanced by greater time for social relationships with family and friends, association with others in the pursuit of shared interests, recreation, cultural experiences, or anything else that does not have to do with the labour necessary for social reproduction in the narrow sense, then there will be a generalised social expectation that the same number of members of Collectives will now need to spend less time in the workplace, everything else being equal. Of course, everything else will rarely be equal. But from the standpoint of this expectation an inefficient use of human labour time is a social problem demanding to be addressed.

We now come to what is perhaps the most fundamental question here: are there good reasons to have confidence that social costs can be determined with reasonable accuracy in a republican socialist society?

Chapter 5, Section 4.3 outlined a procedure for determining a number that would represent significant relative environmental and time costs. The relative opportunity costs of a Productive Collective's output are signalled by the degree to which its output is acquired – or not – relative to that of other Collectives, along with the quantitative and qualitative data regarding its output collected by Community Associations and Research Centres. The procedure makes the 'prices' of the goods community agencies, organisations, households and other associations, and individuals acquire through the use of their income (or, perhaps better, the 'points' allocated to them) *politicised* prices, determined in political processes uniting workers, representatives of the community, and specialists in social and environmental sciences. However, the difference between 'prices' in the model and the prices generated in market societies is not that one is politicised and the other is not. When prices systematically ignore, downplay, or leave to the contingencies of a public policies (as distorted by the influence of particular economic interest and the valorisation imperative), whole categories of social costs, that too is a political matter.¹⁶ An honest

16 A very partial list includes the environmental harms resulting from production and distribution, alienation of the workforce, the lost potential of workers from jobs that do not mobilise their intelligence and creativity, the 'opportunity costs' from neglecting social needs that cannot be addressed through commodities and from neglecting the social needs of those lacking purchasing power, the unpaid care labour that the production and distribution of commodities depends upon, the costs of socialising the research and development private capitals then leverage for private profits, and so on. Similarly, market prices systematically ignore or downplay social benefits that do not take the form of monetary expenditures flowing back to producers to cover their investments and provide profits. A very partial list of that includes the benefits of a healthy metabolic relation-

assessment must conclude that *prices in market societies are as politicised as 'prices' in the model of republican socialism*. The difference is that in one case there is a deceptive appearance of a non-political, quasi-natural, given fact, while in the other case the inherently political dimension of the pricing system is explicitly acknowledged. If we insist that considerations of efficiency in production must take all important costs and all benefits into account, then there is a compelling case to be made that the (explicitly politicised) 'prices' formed in the republican socialism model as described in Chapter 5 are more conducive to efficiency than the (only apparently non-politicised) prices of market societies.

Simply being able to make a case does not get us very far. Critics of the variant of socialism defended here will complain that if the members of Production Collectives and other organisations of socialist self-governance have to negotiate among themselves about the proper pricing of every product, if Sector Agencies and Production Review Boards have to provide them with feedback on the initially proposed pricing of every product, if Social Investment Centres have to negotiate modifications of the price of every product with its producer, then the time that would have to be devoted to these discussions would be overwhelming. In light of this ridiculous complexity, they would surely say, any claim to 'efficiency' is simply ludicrous. Whatever other advantages and disadvantages market prices might have, they enable social agents to reduce the complexity of decisions about production and consumption to a manageable level, reducing demands of time and attention that would otherwise be unmanageable.

It is understandable that such a different price formation process as that outlined in Chapter 5, Section 4.3 raises concerns. But this line of thought is only convincing if we assume that the hyper-proliferation of products that tends to occur in a society subject to the commodification imperative would remain in a socialist society freed from that imperative. If it did, the numbers of products to be considered might well be overwhelming. But it does not:

* In socialism there will not be a proliferation of 'different' products that are fundamentally the same but merely branded differently.

ship between human activity and the surrounding ecosystems, the active engagement of a workforce, the mobilisation of its intelligence and creativity, the flourishing of a community where social needs are democratically determined, the social acknowledgement of all socially necessary labour, whether within formal organisations or not, the development of science and technology for the people rather than for capital.

* In socialism there will not be a proliferation of ‘new and improved’ products designed to motivate discarding products that still function effectively and purchasing new products only marginally different.

Environmental considerations (as expressed in the second solidarity constraint) justify ending these types of product proliferation, as does the socialist politics of time committed to reducing the amount of time spent in formally organised units of production. To this we can add:

* Few products are totally unique. Most are similar to others produced in the given sector in relevant respects. The wheel does not have to be continually reinvented, so to speak. Once a workable ‘price’ reflecting social costs and benefits has been determined for one product, it can serve as a basis for others sufficiently like it in relevant respects. Given the strong ‘family resemblances’ in products and production processes in the same sector (and often across sectors), this significantly reduces complexity and time demands in determining social and environmental costs.

* In contrast to research and development subsumed under the imperatives of capital, research and development in a socialist society will be far more directed to studies encompassing the most important social costs and social benefits associated with production and distribution. An ever-growing body of work will therefore be available to support and guide determining particular ‘prices’, greatly reducing the complexity and temporal demands of the process on Production Collectives.

* As the following chapter will discuss, an ever-expanding number of the products produced in socialism will result from commons-based peer production and take the social form of free public goods in the Commons rather than the form of commodities with prices.

It is worth stressing one final time that the ‘price’ determination process outlined in Chapter 5 need not quickly obtain the optimal result in every case to count as an advance. A rough and ready system of ‘pricing’ is acceptable so long as it 1) takes into account the social costs and social benefits of production and distribution in a more comprehensive manner than any market system is capable of doing, 2) is able to accomplish that result within a reasonable amount of time and with a reasonable amount of effort, and 3) can be adjusted flexibly over time as warranted. The method determining ‘prices’ outlined in Chapter 5, Section 4.3 meets these criteria.

2.4 *Are There Inefficiencies from Excessive Demands of Time and Effort?*

It would be utopian in a bad sense to assume that a high level of revolutionary fervour will be maintained indefinitely in a future socialist society. While an ethos fostering solidarity will replace a cultural value system all too prone to idealise sociopaths, that does not magically increase the total time and energy people have. If the actions demanded by republican socialism demand too much from too many, general social efficiency will be low. If far too much is demanded from far too many, the general social efficiency will reach a breaking point, dooming at least this form of the socialist project.

The concern is misplaced. As we saw in Chapter 9, Section 2, in the model defended here, four out of five years, community members will once a year be encouraged to participate in public forums and referendums regarding the priorities of their local, or regional, or national, or international communities. This requires some time and effort, spread out over the course of perhaps a month. This is not an excessive expenditure of time and effort, and no one is punished for not participating.

All members of Worker Collectives are in addition expected to participate in the self-governing of their workplaces. In most cases, however, this is a matter of electing a Workers' Council or manager to oversee day-to-day operations, participating in deliberations and decisions regarding the long-term policies and prospects of the Collective (for example, the content of proposals for social funding and the principles for distributing the aggregate income among members), nominating co-workers for membership in Sector Agencies and Production Review Boards, and cooperating with others in concrete labour processes. The time and effort these tasks require do not seem especially onerous, especially since they are integrated within the workday and do not require additional time commitments outside the workplace. (Smaller workplaces may require more participation in daily management from all, but only those who are willing to do this will choose to join them.)

There is also, of course, a general expectation that most members of a socialist society will devote the time and effort required to remain generally informed about developments and issues in their communities and workplaces. This too is certainly manageable, leaving ample time and energy available for other pursuits.

Committed members of Community Activist Groups are also necessary to maintain a politically informed and vibrant socialist civil society. There is no reason to suppose the number of those willing to devote extra time and effort to the affairs of their communities will be insufficient. When there is a real opportunity to make a difference in their communities, many will take it.

Republican socialism also requires that those selected by lot to serve in bodies of socialist self-governance will generally be willing to serve (although here too there is no penalty for declining). There are good reasons to think this too will not prove difficult. Terms of service are fixed and not indefinite commitments. The tasks are intrinsically interesting and important. In some cases (Sector Agencies, for example) those selected were previously nominated by co-workers in their Collective, who are in a good position to judge who has dispositions and interests making them likely to accept the new responsibilities. Finally, a commitment to socialist pluralism is manifested in the allocation of responsibilities to different institutions of self-governance. No one institution has excessive social power; each has limited responsibilities. This allows the time and energy required to serve on one of these bodies to be limited and not exceed what people with those dispositions and interests would find acceptable.

This same consideration applies to the time and effort demanded from those holding elected positions of authority. If demands were too great, there would be a worry that not enough people would be willing to run for those positions, and that those that were elected would be overburdened. Both states of affairs would generate a tendency to systematic inefficiencies. But the avoidance of concentrated social power, its dispersal to different institutions of socialist self-governance, is essential to the 'republican' component of republican socialism. This socialist pluralism limits the demands on those holding elected positions of authority just as much as those selected by sortition.¹⁷

Lastly, while socialists rightly regard most appeals to 'human nature' with suspicion, history does seem to suggest that there is not likely to be a shortage of people willing to exercise authority. The problem in history has been that those exercising authority have not been accountable to those over whom their authority was exercised. Republican socialism provides an institutional framework and system of social practices addressing that problem. And it does so while avoiding systematic tendencies to inefficiency.

3 Conclusion

This chapter has examined some likely objections to the parts of the republican socialist model presented in earlier chapters. One set falls under the general heading of incentive objections.

¹⁷ The discussion in Section 1.4 earlier in this chapter also suggests that there is no serious worry here.

Critics are likely to question whether there are sufficient incentives for social agents to contribute the social labour necessary for social reproduction, sufficient incentives to exert effort in work processes, sufficient incentives for them to develop skills requiring extensive education and training, and sufficient incentives to hold positions of authority and not abuse the power associated with those positions. These objections were considered in Section 1. It was stressed how the model includes a strong material incentive: for most people most of the time the main way to obtain the income (or 'points', if you prefer) necessary to acquire the particular goods helping to lead the particular lives they want to live is by contributing to Worker Collectives. The model also does not require a strict equality in the division of the funds making up the aggregate income of the members of a Collective. If the members of a particular Collective democratically decide to take differences of effort, skill, responsibilities, risk, or any other factor into account when allocating the aggregate funds, that is permissible so long as differences remain within the relatively narrow limits compatible with maintaining 'the full and free development of every individual' as the ruling principle of the society.

Even in market societies, the importance of intrinsic motivation vis-à-vis the extrinsic motivation of income should not be underestimated. Yes, people have a strong incentive to attain a decent standard of living. Over and beyond that, however, countless agents strive for the intrinsic rewards of mobilising their creative intelligence, contributing to their communities, and enjoying the respect of peers. There is every reason to think that those motivations will matter even more in socialism. We cannot answer every question about incentives with the utopian (in the bad sense) hope that human nature will be so transformed that no incentive for doing what needs to be done will ever be required. But the adage that in changing our conditions we change ourselves captures a profound truth. We should not downplay the difference between being in a world of material practices fostering an ethos of generalised egoism and a social world of material practices continually strengthening an ethos of solidarity.

Section 2 of the chapter examined a number of objections regarding the efficiency – or lack thereof – of the republican socialism defended in this work. Some supposedly socialist societies have been characterised by inefficiencies from excessive centralisation, others from excessive decentralisation. Strong reasons were given why republican socialism would not suffer from these shortcomings.

Perhaps the most important issue here is whether a socialist alternative without market competition and market prices would be doomed to unacceptable inefficiencies.

'Efficiency' is a contested concept, lacking the neutrality it is often assumed to possess. Capitalist efficiency is measured primarily in terms of the ratio of the market prices of outputs to the market prices of inputs. This notion of efficiency is irrelevant in republican socialism. Too many costs of production having tremendous impact on the development of individuals and communities are either downplayed by monetary prices, ignored altogether, or left to the contingencies of limited and distorted processes of legal regulation. Too many benefits of production are similarly inadequately considered, while other benefits (monetary returns to private investors before all) are granted tremendous weight regardless of their (sometimes positive, all too often negative) impact on the full and free development of every social individual.

That said, the general point holds that individuals, groups, organisations, and communities that use produced goods should have the freedom to decide for themselves which goods provide them with the most benefits, while efficiency demands that the relative costs of production are taken into account as they decide. In the republican socialist model, they have the freedom to decide what products they will acquire and from whom they will be acquired, making use of income granted to them in socialised processes of allocation. And the social costs of production are taken into account in that 1) socialised investment and workplace democracy ensure that opportunity costs, environmental costs, and the relative costs to workers' time of engaging in production processes, necessarily tend to be low relative to alternative social frameworks; and 2) relative costs of production determine the 'prices' of acquiring them, taking into account the full range of social and environmental costs,¹⁸ knowable or foreseeable with the aid of Research Centres devoted to knowing what can be known and foreseeing what can be foreseen.

The process is more complex and takes more time than the setting of market prices in market societies. But there is no reason to think that would generate serious inefficiencies, especially when we take into account how socialism would eliminate a host of socially unproductive activities affecting pricing in capitalism (the costs of managing an alienated workforce, of advertising and branding to exaggerate benefits and attempt to ensure costs are overlooked, of legal dispute over intellectual property, of CEOs demanding to be treated as superstars, and so on). Nor is it the case that it would impose excessive demands on time and effort. We have very good reasons to insist that the institutional forms and social practices of republican socialism would be more efficient in the sense of 'efficiency' that matters.

18 More precisely, the full range of costs is taken into account to the extent that is feasible

I have noted many times in this work that one core feature of a socialist society is a politics of time that tends to reduce the period of their lives individuals must spend engaged in the social labour necessary for social reproduction, especially the time spent within formally organised (self-managed) Production Collectives. The socialist project includes extending the time we have for undertaking projects of our own choosing when, how, and with whom we wish (including the project of not having any projects beyond simply enjoying ourselves, the company of others, and the world around us). This is the topic of the following chapter. The 'realm of freedom' is by definition radically open-ended, lacking the determinant institutions and social practices of the 'realm of necessity'. But this does not mean there are not things to say.

on the basis of available evidence and the best available theoretical frameworks for interpreting it.

Socialism and the ‘Realm of Freedom’

Republican socialism requires ‘freedom in necessity’ including the self-governance of the formal organisations necessary for the material actualisation of the socialist project. However flexible these organisations may be, they are formally structured, with relatively fixed and stable rules and authority relationships. When the freedom of self-governance and non-domination is conjoined with the necessity of rules and authority, we can speak justifiably of freedom in the realm of necessity.¹

Marx spoke of a realm of freedom beyond the realm of necessity. It also has a prominent place in the model of socialism presented here. Section 1 of this chapter notes some of the important ways the realm of freedom in socialism differs from the moments of social life in capitalism freed from the hierarchical structures of capitalist workplaces. Section 2 considers one of the most significant developments in capitalism, the rise of commons-based peer production exemplified in Wikipedia, open-source software, and so on. When this new form of social production first emerged, its great promise to further the social good was loudly proclaimed. This promise has gone unfulfilled, for reasons explored in Section 3. Section 4 argues that it can be fulfilled only when conjoined with a realm of necessity like that described in previous chapters. The chapter concludes in section 5 with a brief overview of its contents.

1 The Realm of Freedom in Capitalism and Socialism: Some Contrasts

In the constitutions of capitalist republics, the social realm is proclaimed to be a realm of freedom where, as private individuals, we can decide for ourselves what to believe, what to say, what to purchase, who to associate with, and

1 Given the importance of the passage, it bears repeating: in the socialism Marx endorsed, ‘[T]he associated producers govern the human metabolism with nature in a rational way ... accomplishing it with the least expenditure of energy and in conditions most worthy and appropriate for their human nature. But this always remains a realm of necessity’ (Marx 1981, pp. 958–9).

so on, a realm where the coercive powers of the state do not reach so long as the rights of others are not infringed. In his critique of political economy Marx showed how this framework ignores the structural coercion forcing those without extensive monetary reserves to hire out their capacity for acting to those owning and controlling investment capital, along with the domination the latter is able to exert on the former in workplaces as a result, and the impersonal domination of capital over the society as a whole. This critique of political economy can be extended to the critique of the 'freedom' on offer in capitalism outside the capitalist workplace. Some examples follow.

The concrete substantive exercise of 'private' freedom always has social preconditions. For most social agents in capitalism, the freedom to live the sort of life one would choose to live is extremely constrained by lack of monetary resources. For a few, their appropriation of surplus value enables a 'private' sphere of excess luxury consumption. Both allow only limited and distorted forms of social freedom.

Insofar as life within the capitalist workplace also tends to be affected by 'divide and conquer' strategies of control, life outside units of capital tends to be limited and distorted by those strategies. The old cliché 'A man's home is his castle' reveals some deep truths about the realm of freedom in the history of capitalism. In most places and most times, it has only been the male head of the household who was granted the freedom offered in the private sphere; wives and children were directly subject to the patriarchal authority of husbands and fathers. The cliché would have had even more historical truthfulness if it were made clear that the man whose home is his castle was generally a white man of property. Insofar as the distribution of income and wealth continues to be gendered and racialised, the scope for 'freedom' outside workplaces continues to be gendered and racialised as well.

The politics of time in capitalism obviously tends to systematically restrict the realm of freedom as well. When the 'ruling purpose' of society is to accumulate as much capital as possible, as fast as possible, units of production will generally attempt to produce and sell as much as they can as fast as they can. In this social context advances in labour productivity (output per unit of labour input) will generally tend to result in increased output, rather than a reduction of labour time. When increased output is required to avoid severe deprivations and is used to alleviate those deprivations, increasing output is defensible. When the point is reached, however, when 'the full and free development of every individual' can be better furthered by a reduction of work time expanding the realm of freedom outside formally organised workplaces, it is not. Neither point can be adequately recognised, let alone actualised, when human time is subordinated to capital's valorisation imperative.

Generalising the previous point, we may speak of an inherent tendency in capitalism to colonise the free time it does grant. Time spent in transportation to and from the workplace, recovering from the physical and psychological stress of the workday, and acquiring the consumption goods necessary to continue our lives as workers, is colonised time.² In contemporary capitalism the distinction between time at work and 'free' time outside the workplace is being eroded through employers' expectation that projects will be worked on at home, work related e-mails will be checked and responded to, and so on. Or consider workers in the gig economy who spend time waiting for their services to be requested over an electronic platform, paid only for time spent fulfilling a request. How should the waiting time be categorised? It is unpaid, and so 'free time' in one close to meaningless sense. In a substantial sense, however, it is capital's time. For many freelance employees the question is raised in an extreme form, with the connection between wages and set hours of work completely destroyed. For most 'independent contractors' little sense of emancipation can be felt amidst stress and time pressures.

'Colonised by capital' is also the appropriate categorisation of 'free time' spent exposed to corporate advertising, and the time engaged in on-line and in-store shopping with all its preliminary and subsequent associated actions (reading promotions, sending in registrations, and so on). Commodified forms of leisure (cruises, theme parks, the gaming industrial complex, subscription streaming, and so on) are often taken to be the proper 'rewards' for contributions of work time, sources of pleasure and satisfaction, measures of success, requirements for self-esteem. In reality, they are all too often a source of boredom and dissatisfaction. Either way, they are not an adequate compensation for alienated and exploited wage labour. What they are is a way to incorporate time 'outside' capitalist workplaces within valorisation processes. Consumer purchases, for example, contribute to the final phase of the valorisation process (C'-M'), retroactively validating some privately undertaken labour as (indirect) social labour.

In recent decades new forms of activity outside formal organisations have arisen and become increasingly important to capital accumulation. An especially striking example is time outside the workplace spent on the internet. In some respects, this time remains 'outside' circuits of capital. It is not spent in wage

2 This categorisation no more rules out workers finding meaning in this time than practices of slavery rule out slaves granting their own meanings to activities in the non-work hours that were part of the social reproduction of slavery as a system.

labour; it often makes use of a free service (Google's search engine, social connections mediated by Facebook, and so on). But when these same expenditures of time provide data for capitalist firms to collect, process, and monetarise within capital circuits, this 'free' time becomes capital's time, incorporated within what Marx termed the self-valorisation of value. From the standpoint of value theory, the information we give in exchange is a 'free gift' to capital, analogous to the 'free gifts' provided by nature, past generations, and unpaid care labour.³

The main claim of this book is that a republican socialism along the lines sketched in this work would count as a major advance in world history over the capitalism that has dominated the globe for the last centuries, measuring 'advance' by the standard of 'the full and free development of every individual'. Previous chapters have attempted to defend this claim by examining production for social needs in the socialist 'realm of necessity'. The present chapter furthers the case by arguing that the 'realm of freedom' in the republican socialist model is superior to the limited and distorted sphere of 'freedom' granted in capitalism. The supposedly separate realms of 'necessity' and 'freedom' are systematically interconnected. In capitalism the limits and distortion of the one are mirrored in the limits and distortions of the other. In socialism, the overcoming of the limits and distortions of the one are mirrored in the substantive actuality of the other. Some examples follow.

In socialism, the material preconditions for the realm of freedom are provided for all through the provision of universal₁ and universal₂ goods for all. Capitalism's combination of poverty and excess is also absent from the social forms of the income used to acquire of particular goods described in previous chapters. While there is no presumption of a strict equality of income in

3 For this reason, I cannot agree with those who hold that the importance of 'intangibles' such as knowledge, brands, and so on, relative to the direct costs of material inputs and wage labour, implies that a technologically induced transition from capitalism to a networked knowledge economy is presently underway (Mason 2016), or even that capital is now dead, replaced by something even worse (Wark 2019). Capital has *always* been incalculably dependent on its vampire-like appropriation of 'free gifts' of nature, previous cultural achievements, the creative intelligence of embodied living labour, and so on. And capital's valorisation imperative ('M must become to M'!) dominates society as much as it ever has. (There has been an increased mobilisation of coercive state power to prevent access to knowledge goods, and a growing gap between capitalist rationality and social rationality (Westra 2018). These are indeed profound developments. In my view, however, they do not justify the views mentioned in the first sentence of this note. Capital has always depended on state coercive power, and an immense gap between capitalist rationality and social rationality has been a defining feature of capitalism from its inception.)

republican socialism, the combination of severe deprivation for some/extreme excess for others is ruled out. This grants freedom outside the formal institutional framework a substantive actuality it lacks in capitalism.

In socialism, the freedom enjoyed by social individuals outside formally organised institutions and apart from socially necessary labour is not distributed in a way privileging some and not others on the basis of gender, race or any other constructed criterion. In socialism the full and free development of *every* individual is as much the ruling purpose of the realm of freedom as the realm of necessity.

In the socialist model, social agents are regularly encouraged to think about the nature of our needs and what makes human beings happier and more fulfilled. We know already that past a certain point, time spent with family and friends, in shared pursuits with those sharing our interests, or in community life, is more valuable than the accumulation of more stuff. For all the talk of preference satisfaction in markets, the widely shared preference for increased free time cannot be given its due as long as social life is dominated by the demand to produce and sell profitably as many commodities as possible. As labour productivity advances, output levels may go up in republican socialism when that furthers human flourishing without imposing unacceptable environmental harm. But there will also be a strong tendency for a general decrease in time spent in the realm of necessity. Self-governance on the level of Production Collectives will tend to result in individual units of production using advances in labour productivity to reduce collective labour time. Sector Agencies are charged with informing Production Collectives of practices and innovations freeing up time, and with actively supporting efforts to adopt them. As productivity advances rapidly diffuse and become sufficiently generalised, higher-level Democratic Assemblies will legislate a lowering of the time spent in socially necessary labour in the economy as a whole.

If there are no capital circuits in republican socialism, there cannot be a tendency for leisure time to be incorporated in those circuits, colonised by capital's imperatives. Tautologies aside, republican socialism unequivocally rejects consumerism as an acceptable definition of the good life, both theoretically and, far more importantly, in practice. As work in formal organisations becomes more creative and fulfilling, as well as more limited in time, our free activity becomes an end in itself, and not (as it is in capitalism) inadequate compensation for impoverished work lives. Consumerism is also in inescapable tension with an environmental consciousness of its costs in depleted resources and excess wastes. And consumerism is not a model for the good life for the simple reason that the time devoted to it does not in fact tend to make our lives happier or more enriched. The billions spent of advertising provide strong evid-

ence that endless consumption as an end in itself is as alien to the human good as the endless accumulation of capital that incorporates it. The socialist project is a project for an 'alternative hedonism' based on a quite different politics of time.⁴

* Finally, apart from orders or preorders of specific goods, data about our leisure activity will be collected in socialism only insofar as it is anonymised and contributes to gathering information about social needs as part of the process of determining paths of social investment. There will be no group with a private interest in monetarising that information by selling it to marketers, no marketers to sell it to, no one with the power to use information about us to manipulate our dispositions to acquire things.

It goes without saying that the activities falling within the realm of freedom in socialism are radically open ended. Some may devote most of their life energies to intimate relationships with family and close friends. Others will throw themselves into their local community, joining activist groups, sports leagues, cultural associations, or religious groups. Some will want to stay informed about as many policy decisions as they can, studying them as deeply as they can. Others will want to devote extensive time to playing musical instruments, or reading, or surfing, or meditating, or any of the other countless activities that agents might find meaningful and enriching to pursue on their own and with others. The activities and shared projects undertaken, and the ad hoc associations formed for these pursuits, are by definition not formally organised as part of the institutional framework and system of structured practices of a socialist society. The realm of freedom in republican socialism is characterised by the fluidity and deterritorialisation praised by left Nietzscheans.

We can affirm that the realm of freedom in socialism is far more extensive and far more fulfilling than the free time offered to wage labourers in capitalism, and far more materially secure for all than the free time offered to the precariously employed, the unemployed, and the surplus populations of capitalism. The radical indeterminacy of the realm of freedom limits what more can be said about this part of the republican socialist model. There is, however, one form of free activity of profound importance from a world historical standpoint that needs to be considered further.

4 Soper 2020, Chapter 6.

2 Commons-Based Peer Production in Contemporary Capitalism

2.1 *The Promise*

In the context of this work, the ‘commons-based peer production’ of knowledge (information) goods warrants special emphasis for a number of reasons. It is a unique form of production in world history. It has the potential to make incalculable contributions to human emancipation and flourishing. And capitalism’s stifling of its promise provides yet another argument for endorsing republican socialism as a superior alternative. A brief description of its main determinations follows.⁵

Technologies of Production. Many categories of knowledge goods can be produced today with the aid of computers and software programs. Unlike the large-scale fixed machinery of the industrial age, key technologies of the contemporary ‘networked information age’ have become widely affordable to individuals in wealthy regions of the global economy and increasingly elsewhere as well. For the first time since the rise of capitalist workplaces replaced peasant-based agriculture at the centre of dominant economies, the technological means for producing paradigmatic products of the age (knowledge goods) are widely owned by individual producers themselves.

Technologies of Collaboration. Those owning computing equipment today also generally enjoy relatively inexpensive access to network connections capable of uniting them with other social agents across the globe. This enables anyone who wishes to use their free time to collaborate with others sharing the same interests to do so on a far broader scale than ever before in human history.

Raw Materials’ of Production. Existing knowledge is the key ‘raw material’ required for the production of new knowledge. Today knowledge incorporating at least part of our collective cultural heritage is freely available as part of a ‘knowledge commons’, providing material for the production of new knowledge goods.

Interests, Expertise, and Motivation of Social Agents. Throughout history individuals have been willing to devote a considerable amount of their free time to projects of their own choice, most often in cooperation with others, without being commanded to do so by some authority and without the prospect of a monetary return. They have had a variety of motivations for this behaviour, including a desire to solve challenging problems, learn a new field, or develop new skills, the exuberance that comes from exercising creativity, the hope of

5 Yochai Benkler’s *The Wealth of Networks* remains the single best study of commons-based peer production (Benkler 2006). See also Von Hippel 2005.

winning respect from peers, and the enhanced sociability that comes from cooperating with others in a shared project or from attempting to improve the lives of others.⁶ What is new today is the number of people with such motivations and sufficient expertise in some field to collaborate effectively with others in projects of mutual interest, able to communicate across electronic networks easily and almost costlessly, while deciding for themselves the projects they will work on, with whom they will collaborate, the form their contribution will take, when and how much time they devote, and so on. Open-source software, Wikipedia, and countless other examples of commons-based peer production establish conclusively that the assumptions underlying the *homo economicus* model of human nature simply do not hold. Great numbers of people having been disposed to engage in living labour to produce knowledge goods without being paid or ordered to do so by some authority with coercive powers.

Distribution of Output. In mainstream economics it is a commonplace that pricing should reflect marginal costs. This idea provides a very poor general framework for understanding pricing in capitalist market societies.⁷ But it does highlight a distinguishing feature of knowledge goods produced and distributed through electronic networks: once a knowledge good has been produced, networked computers allow additional units of it to be produced and distributed across electronic networks at close to zero additional unit cost. The knowledge and cultural goods that result from commons-based peer production can therefore easily be freely distributed by producers over electronic networks to anyone who wishes to use them.

When dispersed computing power and access to networks is combined with social agents possessing the requisite expertise and motivation to freely collaborate in the production and free distribution of a wide range of knowledge goods on a global scale, the result constitutes a new mode of production for producing the knowledge goods that are the defining products of the networked information age.

6 Titmuss's famous study of blood donors showed that offering to pay the market price for blood can result in there being *fewer* donors than appealing to the non-monetary values of potential contributors. Benkler generalises the point: 'Some resources can be mobilized by money. Social relations can mobilize others. For a wide range of reasons – institutional, cultural, and possibly technological – some resources are more readily capable of being mobilized by social relations than by money' (2006, p. 95).

7 How can 'marginal costs' be accurately reflected in prices when so many social and environmental costs are systematically treated as 'externalities'?

The contrast between a system of production that is 'radically decentralised, collaborative, and non-proprietary; based on sharing resources and outputs among widely distributed, loosely connected individuals who cooperate with each other without relying on either market signals or managerial commands' and capitalist production is clear enough.⁸ In the latter, means of production are privately owned by investors, crucial inputs take the form of commodities that must be purchased from their owners, labour power is itself a commodity that, once purchased, grants owners of units of capital (or their agents) the social power to command what is produced and how, while outputs are distributed at a price providing owners with profits to those with requisite purchasing power. Commons-based peer production eliminates the commodity form, the money form, the capital form, and the wage labour form, replacing them with the social forms of informal cooperative relationships freely undertaken within flexible networks on a global scale, producing knowledge goods that are based on the knowledge commons and distributed within that commons.

Commons-based peer production has proven capable of producing results superior to capitalist profit-driven firms in many of the most crucial areas of the contemporary economy, justifying Benkler's conclusion that 'Nonmarket behavior is becoming central to producing our information and cultural environment'.⁹

Ideas like free Web-based e-mail, hosting services for personal Web pages, instant messenger software, social networking sites, and well-designed search engines emerged more from individuals or small groups of people wanting to solve their own problems or try something neat than from firms realising there were profits to be gleaned.¹⁰

Encryption software, peer-to-peer file-sharing software, sound and image editors can be added to this list. Cloud computing, edge and Internet of Things, containers, artificial intelligence and machine learning, and DevOPs are more recent examples of areas where open-source software has proven to be an innovation engine. Individuals cooperating outside firms and the system of market rewards have collectively produced and freely distributed encyclopae-

8 Benkler 2006, p. 60.

9 Benkler 2006, p. 56.

10 Zittrain 2008, p. 85.

dias that have proven useful to millions, entirely new genres of music, political commentary and information about events across the globe, and so on. Already in 2010 Kevin Kelly pointed out that besides Wikipedia,

There are 145 other wiki engines today, each one powering myriad sites that allow users to collaboratively write and edit material. Then there are status updates, map locations, half thoughts posted online. Add to this the six billion videos delivered by YouTube each month in the United States alone and the millions of fan-created stories deposited on fan-fiction sites. ... When individuals work together toward a large-scale goal, this effort produces results that emerge at the group level ... [T]he whole group benefits at the same time that the individual benefits ... Just look at any of hundreds of open-source software projects, such as Wikipedia. In these endeavors, finely tuned communal tools generate high-quality products from the coordinated work of thousands or tens of thousands of members. One study estimates that 60,000 man-years of work were poured into the release of the Fedora Linux 9 software. Altogether, roughly 460,000 people around the world are currently working on an amazing 430,000 different open-source projects. That's almost twice the size of General Motors' workforce, but without any bosses.¹¹

The version of the Linux kernel released to the commons in 2017 had almost 25 million lines of code. Linux and operating systems based on it have one hundred percent of the market for supercomputer operating systems. Linux is also the basis for the popular Android operating system.¹² A survey of 1,200 IT leaders in corporations across the globe undertaken anonymously by Red Hat in 2020 found that 90% are using enterprise open source software, whether for infrastructure modernisation (64%), application development (54%) and digital transformation (54%) and various or other projects. It is being used in 54% of networking applications, 53% of databases, and 52% of security programmes. 'Higher quality software' is ranked as the most important reason for its adoption.¹³

From the standpoint of world history, however, the future potential of commons-based peer production is far more important than its past accomplishments. Benkler's exemplary account of its promise begins with a critical assessment of capitalism that few socialists would disagree with: capitalism is

11 Kelly 2010, pp. 314–16.

12 Birkinbine 2020, pp. 10–11.

13 Red Hat 2020.

fundamentally flawed from a normative point of view with respect to the limited autonomy it allows, the distortions of public discourse it fosters, and the lack of global justice it perpetuates.

* In capitalist workplaces, managers have the power to dictate what we do, when we do it, who we do it with, and how it is done. These are significant restrictions on individual autonomy.

* The private ownership of mass media distorts political discourse (and thereby processes of political will-formation), giving owners disproportionate influence on political life.¹⁴

* In capitalist market societies, knowledge goods generally take the form of commodities and so tend to be produced to address the perceived needs of those with purchasing power. The result is a general neglect of the needs of those in poorer areas of the world. Benkler emphasises two examples. Systematic priority in medical research is given to illnesses that primarily afflict the wealthiest regions of the globe, even as far more people are attacked by far more serious ailments in the poorer countries. And global agricultural research concentrates on crops grown in wealthier regions to the neglect of research on crops most relevant to the nutrition of the majority of humanity. Such tendencies are greatly compounded by an intellectual property rights system that imposes severe restrictions on access to scientific-technical knowledge to those who cannot pay the prices rights-holders demand.

As we have seen, today the production of many sorts of knowledge goods does not require massive investments in means of production. A laptop and a high-speed internet connection are often enough. This enables those with expertise and motivation to undertake commons-based peer production projects with an immense potential to further substantive individual autonomy, democratic discourse, and global justice far beyond what the property and production relations of capitalism can attain.¹⁵

14 '[T]hose who are on the inside of the media [are] able to exert substantially greater influence over the agenda, the shape of the conversation, and through these the outcomes of public discourse, than other individuals' (Benkler 2006, pp. 204–5).

15 A fourth emancipatory promise discussed by Benkler, the positive impact of commons-based peer production on culture, will not be discussed here. Briefly, his point is that this form of production of cultural goods can renew grassroots cultural movements, restor-

Commons-based peer production extends the scope of individual autonomy in that individuals are free to decide for themselves what they will work on, when they will devote time to these projects, with whom they will collaborate, how the shared labour is to be divided, and so on. Contributing to a project does not depend upon permission being granted (or, more typically, a command being uttered) by someone with authority over workers in a hierarchical organisation.¹⁶ This surely counts as a significant expansion of substantive freedom. Autonomy is also furthered from the standpoint of users of knowledge goods as well. They are freely able to appropriate the results of commons-based peer production whenever using them promises to improve their lives, without having to ask permission or pay whatever fee those with ownership rights demand.

When matters of collective concern are discussed in networks of commons-based peer production, social individuals have a far greater ability to participate in interpretations of events and assessments of policy proposals, gaining access as they do so to a diversity of interpretations and assessments. Open many-to-many networks have the potential to greatly expand the public sphere relative to the one-to-many structure of corporate mass media. When citizens freely share the results of their monitoring exercises of power, their evaluations of issues of public interest, their proposals for public policies, and so on, the public sphere becomes more democratic and more dynamic.

* The emergence of commons-based peer production enables those with the relevant expertise, time, and motivation to contribute to the development of medical drugs to meet the most pressing health needs of poor countries, to public plant breeding programmes improving seeds for crops addressing nutritional needs in poor regions, and to similar non-profit driven projects to simply do so. They do not have to wait for permission from state officials or the managers of for-profit firms – permission that in the latter case is rarely granted given their low potential for monetary returns. Also, in commons-based peer production advances in scientific-technological knowledge underlying medicines addressing the illnesses predominantly found in the world's poorest regions, seeds used to meet the nutritional needs of the world's poor in spe-

ing a dynamism that is stifled by an excessive commodification (commercialisation) of culture.

- 16 This does not, however, necessarily mean that activities devoted to these collective projects lack all structure: 'these projects are based on a hierarchy of meritocratic respect, on social norms, and, to a great extent, on the mutual recognition by most players in this game that it is to everyone's advantage to have someone overlay a peer review system with some leadership' (Benkler 2006, p. 105).

cific soil and climate conditions, and so on, are made freely available to anyone who wishes to use them, without the constraints of having to purchase licensing agreements from holders of intellectual property rights. The emergence of this new form of production can further global justice in a way that was simply not possible in previous periods of world history:

The practical freedom of individuals to act and associate freely – free from the constraints of proprietary endowment, free from the constraints of formal relations of contract or stable organisations ... offers a new path ... for achieving definable and significant improvements in human development throughout the world.¹⁷

In his 2006 book Benkler, perhaps the most prominent advocate for commons-based peer production in academia, did not call for the capitalist mode of production to disappear. Socially important forms of production continue to depend upon large-scale fixed investment in machinery systems, plants, and so on. When this is the case, he assumes, for-profit capitalist firms making use of wage labour to produce commodities are generally the most efficient social organisation of production and distribution. He insists that we do not have to choose between a healthy for-profit capitalist market sector, on the one hand, and commons-based peer production, on the other. In his view it is possible for ‘social production and exchange to play a much larger role, *alongside property- and market-based production*, than they ever have in modern democracies’, each making its own distinct contribution to social life.¹⁸

Benkler is not a technological determinist. The mere fact that information technologies could enable a flourishing sphere of commons-based peer production to emerge does not imply it will emerge. He anticipated that capitalist firms profiting from the production of knowledge goods would attempt to use their influence on legislatures to impose barriers to the expansion of commons-based peer production. He granted that they may prove able to limit its development and prevent its transformative potential from being actualised. But he insisted that if there is sufficient political will to resist their endeavours and establish a legal framework allowing the power of commons-based peer production to be unleashed, greater autonomy, dynamism of public discourse, and global parity would follow.

¹⁷ Benkler 2006, p. 355.

¹⁸ Benkler 2006, p. 3 (emphasis added).

2.2 *The Promise Unfulfilled*

At the time of writing his book Benkler was fairly optimistic that the evident successes and future promise of commons-based peer production, combined with the support of firms and investors enjoying its benefits, would foster a political coalition strong enough to maintain a social space where this new form of production could flourish and transform the world for the better.

This optimism was misplaced. The period since its publication has witnessed an intensification of capitalism's social pathologies rather than an abatement of them, even as commons-based peer production has continued to evolve. *The Wealth of Networks* belongs to the genre of capitalist utopianism, non-fiction works depicting a fictional projection of a humane capitalism.

The pattern is familiar. A new technology emerges. Prominent mainstream theorists start to concede in effect that leftist criticisms of the period now concluding were in fact valid. But, they quickly add, while *that* phase of capitalist development was indeed a period of alienation and oppression, 'this time it's different!' The new technologies, implemented correctly, can in principle overcome the alienation and oppression of previous epochs of capitalism – not perfectly, perhaps, but enough to become normatively acceptable. Variants of this apologetic claim rapidly proliferate in academia and popular media, drowning out critical voices. It becomes accepted as common sense. Anyone raising concerns is mocked. New forms of alienation and oppression emerging in association with the implementation of the new technologies are overlooked, or categorised in some different way (as, for example, workers in the gig economy have been praised as independent entrepreneurs, freed from the tyranny of waged labour). Soon enough, however, the ignoring and the miscategorising fail to mask the all too evident fact that the emancipatory promises of this latest version of capitalism have not been fulfilled. Gradually they cease being made, replaced with expressions of cynical realism. By the time the next 'revolutionary' development occurs, the technoutopian claims of the past have been forgotten, enabling the transformative potential of yet another set of new technologies to be proclaimed in more or less the same utopian terms. The new claims will also be based on a drastic underestimation of the determining power of capital. They too will not be fulfilled.

Benkler was not wrong to point to the transformative potential of mobilising collaborative creative intelligence outside formally organised units of production. This is precisely the sort of transformative potential Marx saw in the realm of freedom. What was utopian in the bad sense was his supposition that this realm of freedom could flourish and expand in peaceful coexistence with a profit-driven capitalist sphere.

We can begin by noting how commons-based peer production is limited by the capital/wage labour relationship. Capitalist market societies are the most monetarised societies in world history. When the goods and service needed for a minimally decent standard of living in the given historical circumstances remain in the form of commodities owned by others, obtaining them requires sufficient funds to purchase them at a price profitable for owners. Obtaining funds generally requires some form of association with units of capital. For those who do not possess sufficient financial assets, the standard form of association in general requires putting their living labour at the disposal of some unit of capital or other in return for a wage.¹⁹ Those participating in commons-based peer production outside the capital/wage labour relationship must either be supported by someone in their household, dependent on state support, or, more typically, themselves spend most of their adult waking life engaged in waged labour. When we take into account time lost to travelling to and from work, recovering from its strain, and other ways life outside capitalist workplaces is effectively colonised by capital, the time left for pursuing commons-based peer production is severely constrained. Young adults with energy reserves and few family commitments may still be able to find time and energy for extensive contributions in their free time; older adults with domestic responsibilities will have much less time and energy to devote.

A second limitation concerns the paths commons-based peer production will tend to take when it develops alongside the capital/wage labour relationship. Just as the capitalist project includes a drive to shape nature to make its productive powers provide greater 'free gifts' to capital, there is now a drive to shape commons-based peer production towards the same end. Participation in commons-based peer production provides training and develops skills. If participating in commons-based peer production projects can provide potential employees with the training and skills prospective employers want them to have, that is a positive development from the standpoint of capital. Units of capital then do not have to provide this training and skill development themselves or pay employees while they are being trained and developing their skills. Knowledge workers needing employment by capitalist corporations will 'naturally' tend to participate in the sort of projects potential employers want done, joining commons-based peer production projects where they will be trained and develop skills in the areas of most interest to those corporations. These

19 Most forms of salaried employment are in effect a form of wage labour. For those at the very top of the corporate hierarchy their 'salary' is more accurately comprehended as a share of the firm's profits (surplus value).

will necessarily tend to be projects directed towards commodification, monetarisation, and valorisation, as opposed to projects addressing the shortcomings of a social world subject to the commodification, monetarisation, and valorisation imperatives. Further, in a period when both training and skills tend to become obsolete more rapidly, the risks of obsolescence are increasingly displaced to potential employees. This too benefits capital. In all these ways commons-based peer production is not as freed from the capital/wage labour relationship as it might first appear.

Increasingly, however, commons-based peer production is not freed from the capital/wage relationship even in appearance.²⁰ Numerous companies now set aside a certain number of hours in the work week for employees to contribute to open-source projects. They do so in the hope they will be better able to appropriate results of open innovation projects foreseen to further commodification, monetarisation, and valorisation. If they can begin to make use of these results more quickly and effectively than their competitors, so much the better. Needless to say, managers representing the interests of capital will direct their employees to make every effort to push commons-based peer production projects down paths foreseen to be most useful to the company, whose ultimate goal remains the private appropriation of monetary returns.

No less than the wage form of labour, the commodity form of products both limits commons-based peer production in some respects and shapes it in others. An obvious limitation comes from the intellectual property rights system of contemporary capitalism. The more knowledge goods are transformed into commodities by intellectual property rights created and enforced by the coercive powers of the state, the less free access there is to the knowledge that can serve as an input to the production of new knowledge goods.

Intellectual property rights do not come without cost to capital. The greater the extension and enforcement of intellectual property rights, the more resources must be devoted to litigation, a paradigmatic form of non-productive expenditure from capital's standpoint. Extensive intellectual property rights also discourage potentially innovative firms from investigating promising paths due to both the threat of expensive litigation and the costs of gaining the permission of rights-holders. Small patent holders, and speculators who purchase patents with the sole intention of extracting payments from wealthy firms, are an annoyance to many companies. And, of course, open-source software and other results of commons-based peer production have already proven

20 Haff 2018; Red Hat 2020.

immensely valuable – profitable – to many firms. They will want to keep the social space enabling the production of such ‘free gifts’ open. These considerations all suggest that proposals to restrict and weaken the present intellectual property rights system may be met with fairly broad approval.

But only up to a quickly reached point.

The scope of the intellectual property rights system is not simply a matter of political will, as social democrats like Benkler suppose. The voluntarism of this position overlooks how the extension of intellectual property rights in scale and enforcement has been an essential component of capital’s response to the threat the proliferation of national innovation systems poses to accumulation.

As stressed in Chapter 3, more reasonably effective national innovation systems are in place today than ever before in world history. When a new cluster of innovations with significant commercial potential emerges research expenditures, tax breaks, credit allocations, and a multitude of other direct and indirect subsidies can be mobilised in a number of regions more or less simultaneously. Past ‘golden ages’ of capitalist development have occurred when high profits in particular regions have been appropriated for extended periods as a result of competitive advantages in the world market. With the proliferation of national innovation systems, however, the period in which high profits can be appropriated from competitive technological advantages necessarily tends to be drastically compressed. (In Marxian jargon, the time prior to the outbreak of ‘overaccumulation’ crises, manifested in overcapacity and falling rates of profit, necessarily tends to shorten.) Capital’s response to this state of affairs has included desperate attempts to maintain profits through the heightened exploitation of wage labour, increasingly reckless leveraging of financial assets, more extensive predatory activities in vulnerable regions of the world market, and so on. And it has led to the aggressive assertion of intellectual property rights.

While relatively minor adjustments at the margin are always possible, representatives of capital today have little choice about maintaining an extensive and strongly enforced intellectual property rights regime. *Intellectual property rights enable above-average profits to continue to be appropriated when competitive advantages from innovation would otherwise be eroded.* It follows that there is a dominant tendency in contemporary capitalism for the artificial scarcity imposed by intellectual property rights to remain central.²¹

21 The business strategies of companies at the heart of the so-called knowledge economy – Google, Facebook, Amazon, Microsoft, a handful of others – prioritise expanding their

Commons-based peer production projects are limited when knowledge goods are treated as intellectual property in the form of commodities owned by others, and not as part of the knowledge commons, freely available for anyone to use and build upon. The stifling of the emancipatory potential of commons-based peer production is not a contingent feature of contemporary society. It is a structural necessity of capitalism in our historical moment.

Commons-based peer production is also stifled when it is incorporated *inside* processes of commodification and valorisation. Free software – that is, software subject to a special ('GNU') licence making it freely available for anyone to use and modify, so long as the results are themselves made freely available for anyone to use and modify – has increasingly been pushed to the margins. So-called 'open' software has become dominant. With open software a capitalist enterprise can appropriate code produced through commons-based peer production, tweak it, and claim intellectual property rights in the result. More and more open-source software, in other words, is directly incorporated within privately owned commodities, offered for sale for a profit.²²

Capital is defined by a totalising drive to expand valorisation. It will attempt to bring anything that can be profitably commodified and monetarised within its scope. Capital's claim to be a *totality* capable of self-reproduction out of itself is a lie. Capital is a vampire; its life depends on parasitical relationships.²³ But it is nonetheless *totalising*. It shapes, distorts, and restricts what it relies upon as it ceaselessly attempts to expand. The 'free gifts' of surplus wage labour, unpaid care labour, our common cultural heritage, and the productive powers of nature have been shaped, distorted, and restricted as a result of capital's totalising drive. Open innovation belongs on this list. Commons-based peer production is shaped, distorted, and restricted when assigned the social role of providing a stream of 'free gifts' to the valorisation process.

Commons-based peer production has long ceased being controversial. Bill Gates no longer condemns it as a form of communism. Decades after it has become established, however, the pernicious structural tendencies that valorisation generates have been strengthened, not counteracted. Neither the restrictions on autonomy, nor the distortions of the public sphere, nor the systematic neglect of fundamental needs of populations in poor regions of the world market has been improved in contemporary society.

'war chests' (a most revealing term, that) of intellectual property rights and enforcing their IPR's aggressively.

22 See Haff 2018.

23 See Smith 2020a.

Insofar as commons-based peer production has been incorporated within valorisation processes, it has itself reinforced those pernicious dimensions of contemporary society.

2.2.1 Autonomy

It would be difficult to argue that there has been an increase in individual freedom in contemporary capitalism due to the emergence of commons-based peer production. The technologies of the networked information age have been used to establish unprecedented levels of surveillance of our activities in our roles of workers and consumers. Insofar as commons-based peer production has contributed to the effectiveness of these technologies, it has contributed to the increasing threat to autonomy posed by surveillance capitalism.²⁴

Information technologies have intensified *the real subsumption* of labour under capital. When individual workers know that they are under surveillance they are forced to internalise capital's imperatives or risk discipline and unemployment. The resulting intensification of the labour process greatly increases the stress members of the workforce experience, even as the extensive harmful health effects of stress are becoming better understood. With more unpaid labour time put at the disposal of capital, the rate of exploitation increases. And capital's ability to intensify the labour process limits the energy most workers have to participate in open innovation projects outside the workplace.

Turning to our lives as consumers, the economic model of many leading capitalist firms in our historical moment revolves around monitoring our activities on the internet, collecting and processing this information, and monetising it by selling it to marketers or using it in a firm's own marketing campaigns. In this manner our 'free' time is incorporated within circuits of capital. This too does not count as an enhancement of individual autonomy.

In a formal sense, 'consumer sovereignty' in capitalism still holds. No one is forced by violence or the threat of violence to make a purchase, and the argument is often made that by designing ads that inform us about the products we are likely to be interested in serves our interests better than when the ads we see are only randomly connected to who we are and how we want to live. That is true enough from an abstract standpoint. But as Foucault so forcefully reminded us, knowledge is power. The more detailed information firms have about us, the more power they have to increase our disposition to make a purchase. Specific branding campaigns may certainly fail. Nonetheless, corporate advising has one and only one fundamental goal: to profit from purchases that

24 See Foster and McChesney 2014.

would otherwise not be made. Our subjective dispositions are shaped by the cumulative effect of more or less continuous exposure to marketing, the most comprehensive and scientifically based system of propaganda in world history. When time spent outside the formal workplace is subject to surveillance and monetarisation by units of capital, human time tends to be subordinated to capital's time, dissolving what is proclaimed to be a 'realm of freedom' in capitalism to an extension of its 'realm of necessity'.

There are some important respects in which open-source projects have furthered autonomy in the ways Benkler anticipated. These effects have, however, been overwhelmed by other aspects of networked capitalism, due in part to the way commons-based peer production is restricted by the commodification, monetarisation, and valorisation imperatives. Insofar as commons-based peer production has been incorporated within capital circuits, it not just a matter of failing to contribute to an extension of worker and consumer autonomy. Insofar as open-source code is employed within the software of surveillance capitalism, it has itself contributed to attacks on autonomy.

2.2.2 Democratising the Public Sphere

Who could deny today that information technologies have had pernicious effects on civic discourse and political life in contemporary capitalist regimes? To say the hopes of techno-utopians have not been fulfilled would be a drastic understatement. Those hopes have been tortured and suffocated. Technologically advanced capitalist societies have not established a healthier public sphere, despite commons-based peer production becoming more established and accepted. The rise of the networked information age has introduced new perversions of democratic will-formation.

The use of social media as echo chambers, where people sharing the same views exclusively interact with others sharing those same views, is widely lamented.²⁵ When expressions of irrational fears, insecurities, and prejudices are widely shared and amplified, when falsehoods that could not withstand elementary fact checking are endlessly repeated, when alternative perspectives are thoughtlessly dismissed with mockery and demonised, information technologies contributes to far more to right-wing authoritarianism than to inclusive democratic deliberation promised in an earlier historical moment.

The property and production relationships of capitalism have enabled the platforms on which public discussion occurs to be privately appropriated, despite the fact that the technologies those platforms are based on stem from pub-

25 Pariser 2011.

licly funded research. Protected by their hordes of intellectual property rights, owners and investors have the social power to ensure that the primary purpose of these platforms is their own private profit. In many business model profits are best furthered by giving away their products for free (access to the platform and its features), collecting data on users, and then monetarising that data by either selling it to marketers or using it in marketing themselves. The longer the attention of their customers can be maintained, the more data can be collected from them, and the greater returns the platform owners can appropriate from monetising that data. If it turned out that appeals to fear of the 'other' effectively maintain customers' attention, then appeals to fear of the 'other' will 'naturally' tend to multiply. The resulting distortions of deliberation in the public sphere may to some extent be only a by-product of profit-seeking. The distortions form a systemic pattern nonetheless.

It is also the case, however, the property and production relations of capital grant those who would benefit from distortions of the public sphere the social power to bring about those distortions. The extremely regressive political and economic agenda of a growing faction of capitals would not gain electoral support if it were openly espoused. In the formal democracy of capitalist societies with extended suffrage rights, no party is likely to be successful if it openly proclaims its intention to further the economic and political interests of a small percentage of the populace at the very foreseeable cost of harming the life prospects of everyone else. A party that embraces a regressive agenda *must* distort political discourse in a formally democratic system by dissembling its objectives and gathering support in other ways. We know from evolutionary biology that it is far easier to mobilise fear than reason. The defining structures of capitalism all but guarantee the emergence of political forces backed by billionaires' cash dedicated to emphasising the politics of fear, resentment, and ignorance. Candidates furthering that agenda can get elected through appeals to insecurities and prejudices amped up by social media. The endless repetition of untruths leads provable falsehoods to be taken as common sense by a significant portion of the populace. The challenge of maintaining the dominance of a very small minority in a formally democratic political system is thereby solved.²⁶

26 As MacLean 2018 documents, right-wing 'populism' did not spontaneously arise. From the start it has been well funded by the most regressive factions of capital as part of a long-term strategy for gaining control of all branches and all levels of the political system. While gerrymandering, voter suppression, and structural racism have played important roles in this project, the impact of private control of the means of social communication and circulation of ideas cannot be underestimated.

This is not to deny that the commons-based peer production of knowledge goods has also contributed to public discourse in exactly the ways Benkler spoke of. Great numbers of people have been willing to freely commit time and effort to producing informed and critical analyses of issues of public import and to freely distribute the resulting products without demanding monetary returns. The claim here is simply that as long as the production and property relationships of capitalism are in place commons-based peer production cannot compensate for the systematic distortions of the public sphere imposed by capitalism. When the results of commons-based peer production are incorporated by capitalist firms with an economic interest in keeping their customers trapped in 'filter bubbles', those freely contributing to the commons-based peer production do more to undermine an inclusive public sphere of reasoned democratic deliberation than to counteract that undermining. 'Knowledge is power', and the knowledge collected in surveillance capitalism has been used to shape political dispositions just as it has been used to affect dispositions to purchase commodities.

2.2.3 Global Justice

Commons-based peer production has indeed provided poorer regions with greater access to important knowledge goods than was possible earlier. But the promise of significant improvements in the most disadvantaged regions of the world from the spread of commons-based peer production have gone unfulfilled. It bears repeating that in an age of overproduction the best hope for winning high profits from innovation for an extended period is a strict intellectual property rights system that disadvantages the disadvantaged. Insofar as open-source innovation has been combined with the innovations generated within the national innovation systems of wealthy countries, it has exacerbated the gulf between areas enjoying virtuous circles of innovation and competitive advantages in the world market and those areas afflicted by vicious circles.²⁷ The tendency to uneven development in the world market has not weakened.

27 Another point bears repeating too. China was able to leverage foreign investments in its domestic economy and exports to construct an effective national innovation system. But its method cannot be generalised. The special conditions that enabled it to demand that foreign investors had to transfer technology (extensive supplies of skilled disciplined labour, amply supported local suppliers, potentially immense domestic market, and so on) do not exist elsewhere. China aside, there has been no evidence of convergence in the global economy bringing income and wealth closer together. And as long as there is systematic overcapacity in the global economy – that is, as long as there is no Great Depression or World War destroying productive capacity on the requisite scale – options for

In summary, it is correct to highlight the differences between for-profit proprietary production within the authoritarian hierarchies of capitalist firms and the freely undertaken collaborative production of products freely available to all who wish to use them. The latter is not defined by the commodification, monetarisation, and valorisation imperatives that define capitalism. As the above discussion suggests, however, the dominant trend has not been for commons-based peer production to become established as a distinct form of production alongside capitalist production. The tendency has instead been the real subsumption of commons-based peer production-source projects under the capital form, making it a provider of 'free gifts' to capital. This is not an expansion of a realm of freedom, but rather the real subsumption of a limited and distorted realm of freedom within an entrenched and expanding realm of necessity.

There is, in other words, a strong tendency in capitalism to eliminate any realm of freedom and force all of social life into its realm of necessity.²⁸

3 **The Realm of Necessity and the Realm of Freedom: A Dialectical Unity-in-Difference**

The realm of freedom and the realm of necessity are dialectically intertwined. The realm of freedom illustrated in Benkler's description of commons-based peer production does not fit well alongside a realm of necessity defined by the social forms of capital. Generalising from this case, and from other dimensions of so-called 'free time' in capitalism, we can assert that the dominant drive in capitalism is to eliminate the realm of freedom, colonising time spent outside the formally organised capitalist workplace just as time within it is colonised. Time outside the workplace tends to become time spent recovering from the physical and psychological strain of work, time spent in play that is monetarised either directly (e.g. through for-profit streaming services) or indirectly (through collection of data that can be sold to marketers), time exposed to advertisements that spurs our desires to consume commodities, time spent in making the purchases complete capital circuits, and so on.

The conclusion is clear: *a realm of freedom suited for human flourishing demands a realm of necessity suited for human flourishing.*

developing nations to catch up will be more fantastical than realistic. It simply costs too much to establish an effective national innovation system, without which having competitive advantages in the world market in products and productivity is close to impossible.

28 Negri's category of the 'the social factory' is useful in this context.

The socialist realm of necessity presented in the previous five chapters institutionalises freedom (self-governance, non-domination) in necessity, incorporating a vastly extended commons. Production enterprises are not privately owned. Means of production used in those enterprises are part of the socialist commons too, along with the social investments in Production Collectives operating for social ends. Deliberations and decisions made within these enterprises, like the deliberation and decisions in the democratic determination of needs, are expressions of social freedom. Nonetheless, in socialism too socially *necessary* labour is defined by its *necessity*.

Production Collectives are formal organisations, with formal commitments to address a specific range of social needs in return for social funding. The members are *not* free to work on any project they want whenever and however and with whomever they wish. Worker self-management involves a formal process of making collective decisions, whether by the workforce as a whole or by a democratically delegated manager or Workers Council. Once a decision has been made, individual members must abide by that decision unless and until it is reversed. If specific inputs in the labour process are required, Collectives cannot simply seize them. They can only be obtained through formal agreements with the Production Collectives producing those inputs, using the social funding they have been socially allocated. Neither are those who wish to contribute socially necessary labour free to join any Worker Collective they wish whenever they wish. Established Collectives have the discretion to accept or refuse applications for membership depending on their assessment of their needs and the qualifications of applicants (with strong safeguards against discrimination). Further, becoming a member of a Collective involves a time commitment that members must comply with in the absence of extenuating circumstances. All of this is more than enough to conclude that the model of republican socialism presented in Chapters 5–9 falls in the realm of necessity, however greater the scope of individual, group, and community freedom might be compared to alternative frameworks.

The realm of necessity, then, will not disappear in republican socialism. But for the first time in world history, the determinations of this realm support a dynamic expansion of the realm of freedom. We have already considered the most important form of this support, a new politics of time. In capitalism the drive to increase the amount of time devoted to surplus labour follows directly from the valorisation imperative on the level of society as a whole. Surplus value-producing labour remains trapped in the realm of necessity. Using advances in productivity to reduce the time spent in paid employment has proven immensely difficult. What victories have been won have been met with an intensification of labour processes and the colonisation of so-called leis-

ure time by capital. The politics of time in socialism, in contrast, rests on an acknowledgement that there is some point past which producing more output does not further human happiness as much as having additional time for family, friends, acquaintances, participation in the life of communities, and for projects of one's own choosing. It rests on the alternative hedonism Kate Soper eloquently describes.²⁹

It is also worth emphasising again that the colonisation of so-called leisure time associated with 'surveillance capitalism' will be dissolved in socialism. It is not that data regarding the sorts of goods individuals and groups believe are best suited to meet their universal and particular needs will not be collected. Such data provides crucial information to Community Activist Groups, Community Associations and Democratic Assemblies about priorities of social needs, to Worker Collectives regarding the sorts of products to produce, to Social Investment Centres regarding the sorts of units of production and production networks warranting social investment, to Research Centres regarding the paths of scientific-technological research promising to contribute most to social well-being, and so on. But in republican socialism there are no agents with the concentrated social power to use this data to manipulate the behaviour of others.

Time spent outside formal workplaces in socialism will not be free from the complex determinations of biological and social life. But it will be free from both the real subsumption of everyday life under capital's imperatives and from the personal and bureaucratic domination of unaccountable political and economic elites. Acts of oppression in interpersonal life are ruled out by the ethos of solidarity and by enforced constitutional principles based on that ethos. Apart from that we are free to do what we like when we like and with whom we choose, making the scope of freely chosen projects in socialism indeterminate.

Countless activities that people will choose to pursue will not contribute to the collective production of knowledge goods. Nonetheless, we can say with great confidence that many social individuals will freely devote time and effort to commons-based peer production projects without demanding either monetary compensation or private property rights in the results.

29 Soper 2020.

4 **An Emancipatory Promise Fulfilled: Commons-Based Peer Production and the Socialist Project**

In socialism far more people will have far more free time to contribute to the knowledge commons, as the time and effort spent within formally organised workplaces decline relative to that extracted from employees in capitalism. How this time is spent will not be distorted by the relentlessly repeated lie that the consumption of commodities is the core of the good life, rather than activities and social relationships that mobilise our creativity, intelligence, and emotional attachments. And restrictions to the knowledge commons imposed by intellectual property rights will be absent. Access to the knowledge goods that are enabling conditions for the production of new knowledge goods will not be limited to those who can afford to pay what rights holders charge. Those charges are a tribute payment to capital enforced by the coercive powers of the capitalist state, analogous in important respects to the tribute extracted by kings and lords. Republican socialism eliminates capital and its demands for tribute.

As a result, the immense potential of commons-based peer production to transform the social world in the ways Benkler anticipated can be fully unleashed.

4.1 *Autonomy*

Freed from the politics of time in capitalism, and the incursions of surveillance capitalism into supposedly 'free' time, there is substantive autonomy to engage in forms of life of our free choosing (including but by no means limited to, collaborative social production) to a degree ruled out by the property and production relations of capitalism. Autonomy in the realm of freedom in republican socialism is the flip side of autonomy in its realm of necessity. As Hegel saw and Marx echoed, both social theory and metaphysics must recognise that freedom and necessity are intrinsically related and not dualistically opposed.

4.2 *Democratising the Public Sphere*

Political will-formation is limited and distorted in capitalist market societies, even when formal rights to free speech, freedom of the press, and the political pluralism of competing political parties are acknowledged. In republican socialism, no one holds concentrated social power enabling them to use access to vast data bases regarding voters to further their private political agenda. There will not be a concentrated private ownership of media enabling the political perspectives of private owners to play a predominant (whether overt or covert) role in shaping political discourse. Nor will the platforms for public discourse be advertiser-driven, allowing those buying ad time to shape and dis-

tort political discourse. The platforms used to distribute information and host public discourse on political issues on a broad scale are not privately owned in the socialist model defended here. In republican socialism the very possibility of a small group accumulating immense social wealth and political power is ruled out from the start, eliminating what is perhaps the single most important causal factor explaining the anti-democratic politics of fear and misinformation circulating in contemporary public discourse.

In republican socialism, voluntary associations with divergent views are able to circulate political views and host open discussions of public policies from however broad or narrow a political perspective they wish on information platforms as a commons-based peer production project, so long as elementary solidarity is maintained. The principle of political pluralism is formally affirmed in the constitutions of democratic capitalist republics. Only a republican socialist society, however, has property and production relations compatible with the material actualisation of that commitment.

The central point once again, is that the transformative potential of commons-based peer production cannot be fully actualised in a realm of freedom if the social forms of capital define the realm of necessity. The social forms of capital are totalising. They may not constitute a one-dimensional total society where all contradictions have been overcome. But they do limit and distort the supposed realm of freedom in capitalist market societies, subsuming it under capital's imperatives.

4.3 *Global Justice*

This same line of thought holds as well for a third social consequence of commons-based peer production anticipated by Benkler, its contribution to establishing a more just global order. It is true that commons-based peer production has a transformative potential to develop better seeds for crops providing local nutrition in poor regions, superior medicines for illnesses primarily affecting people in disadvantaged regions, and to address other matters of concern in disadvantaged parts of the globe. But this potential cannot be adequately realised so long as so many of those with the inclination and scientific-technological training to contribute are subject to overwork within units of capital with private profit as their ultimate purposes or are employed by non-profit institutions enlisted to provide the long-term, risky, and costly research for the private sector that the latter does not wish to fund itself. Nor will global inequality and deprivation be adequately overcome as long as the system of intellectual property rights upon which capital accumulation increasingly depends remains in place.³⁰

30 We should also recall that in the model of republican socialism, presently disadvantaged

Capital is happy to appropriate the fruits of commons-based peer production as 'free gifts', just as it is happy to appropriate the 'free gifts' of unpaid care labour, the surplus labour of wage workers, the productive powers of nature and machinery, and the cultural heritage of past societies (the 'general intellect'). But in all these cases it limits and distorts what it appropriates. Alongside the intensifying social and environmental threats posed by contemporary capitalism, these limitations and perversions provide another compelling reason to conclude that capitalism has reached its world historical limits. The emancipatory potential of commons-based peer production can only be fully unleashed in socialism.

Whether that potential is in fact unleashed, of course, is not for the model to determine. That must be left to those who will live in a future socialist society. The realm of freedom is just that. Once the social responsibility of contributing socially necessary labour has been met, one is free to do what one wishes. We have plenty of evidence, however, that most people enjoy developing interests and expanding their formal and informal knowledge of what they are interested in. There will almost certainly be a wide range of areas where a critical mass of interested people with relevant formal and informal knowledge willingly collaborate. We can also be confident that insights regarding these areas will continually arise, and that those who have them will be willing to share them with others sharing their interests. These activities are enjoyable in themselves. Contributing to a collectively shared end brings a sense of personal accomplishment, reinforced by the mutual recognition of other contributors.

In socialism, then, we can be confident that commons-based peer production will flourish spontaneously. There is no reason, however, to leave matters there. The United States military, realising the advantages of mobilising innovative potential outside the organisational forms of capitalism, regularly offers monetary prizes to collaborative teams coming up with significant advances in technologies of special priority to the military sector.³¹ The Democratic Assemblies and Research Centres of socialism could do the same on a far more extensive scale, offering prizes in the form of bonus income to commons-based peer production teams discovering better solutions to problems of high pri-

areas have the same per capita share of investment funds (and the allowable environmental footprint) as anywhere else. Those living in these territories will no longer have to depend on external sources for scientific-technological advances relevant to their needs. They can establish effective innovation systems and make those advances themselves.

31 <https://www.darpa.mil/work-with-us/public/prizes>.

ority to the general society. This would complement, rather than replace, the Research Centres directed towards those problems within the formally organised national innovation system.

5 Conclusion

Marx contrasted a realm of freedom and a realm of necessity. The former must have a prominent place in any adequate model of socialism. Some of the important ways in which the realm of freedom in socialism differs from social life in capitalism outside formally organised capitalist enterprises were considered in Section 1. Section 2 considered one of the most significant developments in contemporary capitalism, the emergence of commons-based peer production on a greatly expanded scale. When ownership of the essential means of production is widely dispersed among social agents, the mobilisation of living labour does not take the form of wage labour sold as a commodity, and the inputs and outputs of production are distributed as free goods for anyone to use as they wish, all on a macro-level scale, then a situation where 'labour has become not only a means of life but life's prime want', and where the principle 'from each according to their ability, to each according to their need' becomes within reach.³² The rise of commons-based peer production in contemporary capitalism offers convincing evidence that such a form of production is not a utopian fantasy. In some respects it exists today, even if in a profoundly distorted and limited manner that leaves its emancipatory promise unfulfilled.

For the foreseeable future, at least, it would be a fantasy to suppose that social reproduction could be left entirely to a realm of freedom where all social labour is performed spontaneously, with no need for formal organisational structures. The model of socialism defended in this work is not based on that dream. It assumes instead that a socialism for the twenty-first century requires a 'realm of necessity'. As Section 3 explicated, it also is based on the claim that a 'realm of freedom' without the limitations and distortions imposed by capital is objectively possible, so long as the formal organisations of the 'realm of necessity' have the 'full and free development of every individual' as their ruling purpose, actualised through self-governance without domination and production for social needs.

32 These phrases are, of course, from Marx's 'Critique of the Gotha Program' (Marx 1989).

Commons-based peer production, once again, is only one of an indefinite range of activities people in socialist society might choose to undertake in the realm of freedom. There will be freedom to spend time with family, friends, and acquaintances. There will be freedom to undertake activities of our choosing, with whomever we choose or by ourselves alone, including the freedom to do nothing more but appreciate the sun on a sunny day, the mist on a misty day. Many of these activities will be undertaken simply for the intrinsic pleasure of undertaking them. Many will not aim at producing innovative knowledge products. But we know that a great many people are willing to devote considerable time and effort to contributing to such innovation projects, and willing to allow them to be used by anyone who wishes, for a variety of motivations besides monetary reward. There is every reason to think that the number of people willing and able to undertake this special sort of activity will be much higher in socialism thanks to the ethos of solidarity, greatly reduced time constraints, and other features of the model.

The scale of the contribution to 'full and free development' that would be made by commons-based peer production in socialism (Section 4) provides a final reason to consider republican socialism as a world historical advance over any variant of capitalist market society. Socialism may not turn out to provide the ultimate form of human freedom. But it will include a realm of freedom unsurpassed in human history.

Conclusion

This concluding chapter begins with an overview of the book's main themes. Section 1 summarises the case against capitalist market societies – and for the necessity of an alternative form of social life – presented in Chapters 2 and 3. The central thesis of the book is that republican socialism offers the most promising alternative. Chapter 4 introduced a number of fundamental principles defining the republican socialist project as it is understood here. Chapters 5–11 presented and defended a model of institutions and social practices that would make those principles material actualities and not mere abstract 'oughts'. These chapters are summarised in Section 2. The final section is devoted to an all too brief reflection on forms of social action that might lead us from where we are now to where we need to be.

1 Why Socialism Is Needed

The 'father' of modern economics, Adam Smith, regarded the thesis that 'consumption is the sole end and purpose of all production' as 'so perfectly self-evident that it would be absurd to attempt to prove it'.¹ The standard view of the capitalist economy is that, in principle at least, capitalism is able to further this end and purpose better than any feasible alternative. Its defenders assert that a system of market competition where investors have freedom to invest, and consumers have the freedom to decide what they will purchase, tends to reward producers who offer better products at lower cost. This gives them a strong incentive to introduce *product innovations* and *process innovations* that provide affordable goods and services that effectively address human wants and needs.²

Most advocates of the standard view grant that there is another side of the story; capitalist markets may also stifle freedom and undermine well-being. In their view, however, the crucial matter to remember is that the functioning of markets depends upon the background conditions in place in the given historical context. In modern democracies, political action can change these

¹ A. Smith 1976, p. 155.

² Baumol 2003.

background conditions, enabling the shortcomings of contemporary capitalism to be overcome with the proper regulatory frameworks and public policies. Social democrats, the most progressive advocates of the standard view, call for reforms such as worker rights to co-determination, a basic income guarantee, monetary and fiscal full employment policies, reparations for past injustices, financial regulations discouraging speculative bubbles, environmental policies reflecting the urgency of abandoning fossil fuels, vigorously enforced anti-monopoly legislation, and steeply progressive income and wealth taxes.³

Socialists support struggles to improve the life prospects of those harmed by capitalism. But in their – in our – view, the most far-reaching social-democratic proposals are simply incompatible with the social relationships of capitalism. Other proposals might improve conditions at the margin for some people in some places, but they are incapable of being generalised throughout the capitalist world system. For socialists, the imperative to end needless suffering and further human flourishing is an imperative to bring about a new phase of world history, beyond the capitalist epoch. Justifying this conclusion requires a compelling account of both what capital is in general (Chapter 2) and what capitalism has become today (Chapter 3).⁴

To understand what capital is, we must begin where Marx began, with the *dissociated sociality* of generalised commodity production and exchange. In this system, production is undertaken privately, without social coordination either among units of production or between them and those who might acquire their products. This is not a ‘natural’ or ‘normal’ form of sociality. It is in fact a quite abnormal, historically specific to capitalist market societies of recent centuries.

If the social relationships among producers, and between them and those who ultimately consume their output, are not established directly before production, they must be established indirectly afterwards. The validation of privately undertaken production as *social* production (to some degree or other) is accomplished retroactively when its output is sold for money. Only then do these products objectively possess social *value*. Units of production in general-

3 Most important terms in social theory are deeply ambiguous, used in different ways by different authors. Progressive theorists and activists who call for the sorts of reforms listed above often call themselves and are referred to by others as ‘socialists’ (Honneth 2017 and Piketty 2021 are two recent prominent examples). Here, however, I have referred to this position as ‘social democracy’ and reserved the term ‘socialism’ for the view that a qualitative break from capitalist market societies is required at this point in world history.

4 See also Smith 2017a.

ised commodity production and exchange, then, are *compelled* to make sale for money the overriding end of their endeavours. If this end is not attained, their investments will have been wasted.⁵

This compulsion is reinforced by the fact that the inputs required for production generally take the form of commodities owned by others. If units of production hope to continue operating, they *must* obtain monetary returns if they are to purchase the commodity inputs required for production in the future. More than that, if they begin a new production period with a significantly lower amount of investment funds than their competitors, those competitors will be better able to expand production, invest in more technically advanced means of production, increase marketing expenditures, develop promising new product lines, respond to new market opportunities, meet unexpected market fluctuations, attract investors, retain key managers and workers, and so on. Given the ceaseless and relentless competitive pressures facing units of production and distribution in market societies, units of production are under ceaseless and relentless pressure to obtain monetary returns *exceeding* their initial investment. Units of production and distribution that do not systematically direct their endeavours to the appropriation of monetary returns (M') exceeding initial investment (M), tend to be pushed to the margins of social life, if not forced out of existence altogether. They *must* therefore systematically subordinate other ends to the pursuit of monetary returns.

Marx's conclusion regarding units of production and distribution in capitalist production and exchange is unequivocal: 'Use-values must therefore never be treated as the immediate aim ... nor must the profit on any single transaction. [The] aim is rather the unceasing movement of profit-making'.⁶

In generalised commodity production and exchange it is a tautology to say that means of consumption also generally take the social form of commodities owned by others. Social agents needing those commodities therefore *must* acquire money to purchase them. This generally requires some form of association with capitalist enterprises whose 'aim is ... the unceasing movement of profit-making', whether from working for a poverty wage, or appropriating vast 'capital gains' from investments, or something in-between. After income has

5 This does not mean that value is created in exchange. It means that 'value' as a special ('purely social') property of commodities is not an objective social fact prior to the retroactive validation in exchange of labour undertaken in the production process as socially necessary. Prior to this validation we can only speak of intended (projected, anticipated, hoped-for or assumed) value. Value is created in the dialectical unity-in-difference of production and exchange.

6 Marx 1976, p. 254.

been spent and commodities consumed, social agents *must* replenish their funds in order to gain access to needed commodities in the future, renewing association with units of production whose aim is 'unceasing ... profit-making'.

A commodity has value in the sense relevant to modern capitalism only if it addresses a perceived need of some buyer. (As Marx noted, if there is no *use value* there is no *value*.) But Smith's claim that the 'end and purpose' of the capitalist economy is to provide goods and services for consumption is not at all 'perfectly self-evident'. It is, in fact, false. The dominant end and purpose of production in capitalism is the transformation of the monetary value M into a greater monetary value M' (or *valorisation*, in Marx's terminology).

The M' that culminates one sequence is the basis for a new, higher M in the next round of production. The same competitive pressures that generate the drive to M' generate a drive to an even greater M'' in the next period, and then to M''', M''', and so on. This repeated expansion gives the valorisation process *substantiality*. Specific commodities, industries, persons, groups, and entire communities come into existence and pass away, but this process persists. Marx's term for this ongoing value-in-process is '*capital*'.

Capital is not a 'thing' in the sense that a chair or a table are things. It is not separable from social agents and their actions of investing, producing, selling, consuming, and so on. Nonetheless, capital forms a distinct region of social ontology. Emerging from the historically specific form of (dissociated) sociality, 'it' possesses distinct properties and tendencies. This non-human 'thing' has a real power to impersonally dominate the social world from which it has emerged.

Marx recognises that markets provide a space where different individuals and associations pursue human ends. But this pursuit is subordinated to the valorisation imperative of capital ('M must become M!') There is a reason Marx named his masterwork *Capital* and not *Capitalists*; those making investments and appropriating profits are themselves subordinated by the valorisation imperative. Social agents pursuing ends furthering (or at least compatible with) capital accumulation as an end in itself tend to prosper. Those pursuing ends incompatible with capital's goal do not.

From this standpoint, matters of concern to the progressive advocates of the standard view – the neglect of social needs that commodities cannot address; the neglect of the needs of those without sufficient purchasing power; vast disparities of income and wealth; the structural asymmetry of power in labour markets and workplaces; the destruction of the environment stemming from the need to 'Grow or die' and so on – cannot be dismissed as a failure of sufficient political will to establish the proper background conditions for market transactions. As the saying goes, they are features, not bugs.

Capital in the primary sense of the term is invisible to defenders of the standard view. Once it has become visible, other limitations of the position become visible too. The state in a capitalist market society is a capitalist state. Its officials may not simply represent the capitalist class. And the state is not a mere epiphenomenon of the economy; state regulations and public policies are capable of strongly affecting paths of capitalist development. But the state too is subordinated under the valorisation imperative. The capitalist state is not a state *in* capitalist society; it is the state *of* capitalist society.⁷ Proposals that would fundamentally shift the balance of power between wage labour and capital in favour of the former fundamentally threaten the continued transformation of M into M' on the aggregate level, undermining the capabilities of the capitalist state. Sooner rather than later, then, reforms that have this consequence must either be rescinded or be undertaken as part of transition beyond capitalism and its state.

Reforms seriously attempting to address the environmental crisis will reach this crossroads too. The goal of capitalism is the accumulation of as much capital as possible as fast as possible, primarily through the production and sale of as many commodities as possible as fast as possible. A social system defined by this drive will invariably deplete natural resources at a faster rate than they can be replenished and generate wastes at a faster rate than they can be processed by surrounding ecosystems. Past a certain indeterminate point, attempts to dissolve the tendency to environmental crises must either refuse to take that step or begin to dismantle the structures and social practices that generate that tendency. The former abandons the project of maintaining planetary conditions conducive to human flourishing, the latter goes beyond reforms compatible with capitalist market societies.

Reforms can make capitalist societies more humane in limited and precarious ways. But there have been more or less humane variants of slavery. That does not change the fact that no form of slavery is acceptable. Just as there is a theoretical and practical imperative to dissolve the social relations of slavery, there is a similar imperative to dissolve the social relations from which capital emerges as an alien power over the very social world it has emerged from.⁸

⁷ This important distinction is stressed throughout Hunter et al. 2023.

⁸ 'The recognition of the product as its [labour's] own, and its awareness that its separation from the conditions of its realisation is an injustice – *a relationship imposed by force* – is an enormous consciousness ... and just as much the KNEEL TO ITS DOOM as the consciousness of the slave that he *could not be the property of the another* reduced slavery to an artificial, lingering existence, and made it impossible for it to continue to provide the basis of production' (Marx 1994, p. 246).

Chapter 3 turned from an abstract and general consideration of what capital is to a more concrete account of how contemporary capitalism differs from previous phases of capitalist development.

We know from technology studies that maintaining a stream of innovations requires an extensive national innovation system, including research centres (with or without university affiliation), corporate R&D labs, professional associations, professional conferences, and the like. An education system must produce ample numbers of knowledge workers with the background required for the different types of innovative activities, from scientists operating at the frontier of scientific-technological knowledge to line workers producing and using advanced machinery. Specialised training in technical areas must also be provided. Business schools must graduate managers capable of overseeing product development; law schools must produce armies of lawyers specialising in intellectual property rights, contracts among high tech firms, and so on. Venture capital funds are needed to support high-tech start-ups, and banks to provide loans in support of the purchase of technologically advanced machine systems.⁹ None of these things are inexpensive. Only a relative handful of regions in the world market have been able to afford to establish relatively effective innovation systems. Nonetheless, there are more effective national innovation systems in place today than ever before in human history.

Capitalism's innovative dynamism is undeniable. Theorists of capitalism generally assume that technological dynamism and economic dynamism are strongly correlated. There have in fact been previous periods of capitalist development when this was the case. Past 'golden ages' of capitalist development have unleashed the commercialisable potential of technological revolutions.¹⁰ If capitalist competition is competition to produce as efficiently as possible the products consumers want, and if national innovation systems provide a fairly continuous stream of commercialisable innovations resulting in better products and more efficient ways of producing them, how could the relative proliferation of national innovation systems not be a positive development for capitalism?

The reasoning behind this question overlooks an obvious but too rarely appreciated aspect of technological change in capitalism: *In capitalist market societies, it is not innovation in itself that matters, but the profits won from the competitive advantages that innovations bestow.* The fact that the proliferation of national innovation systems generates and diffuses a stream of innovations

9 See Nelson 1993.

10 Perez 2002, Chapter 12.

more rapidly is important in use-value terms. But the production of use-values is not the ultimate purpose of capitalism. When decisions regarding investments are made, the anticipated level of profits is the sole relevant issue.

In the industrial revolution, British capitals enjoyed an immense competitive advantage for decades over manufacturers elsewhere. This advantage was maintained for a comparably long period in a second technological revolution, the age of steam and railways. At the end of the nineteenth century and first decades of the twentieth, the USA and Germany overtook Britain, thanks in good part to competitive advantages in the new technologies of steel, electricity, and heavy engineering. After the defeat of Germany in two world wars, capitals within the national innovation system of the US claimed the cutting edge of the scientific-technological frontier in the age of oil, the automobile, and mass production (so-called 'Fordism'). In all these cases a 'golden age' of capitalist development took place in the territories at the forefront of a technological revolution, characterised by high levels of investment, rising real wages, ample employment opportunities, steady growth, and higher living standards for a wider sector of the populace.¹¹

The long historical period where one (or at most two) national innovation systems had a significant advantage for an extended period over others is unequivocally over. Given the spread of national innovation systems, scientific-technological advances made in one area of the globe can be duplicated elsewhere more rapidly than ever before in human history. The time in which high profits can be won from a competitive advantage based on innovations tends to be greatly compressed as a result.

The possibility of more rapid duplication does not imply that it is possible to catch up instantaneously or costlessly. Nor does it imply that all advances are eventually duplicated. Directors of other innovation systems may choose to not commit the resources required for reverse engineering or developing a substitute. Some technological advances may involve theoretical or practical challenges making them far more difficult than others to duplicate. Political and cultural factors may discourage mobilising a national innovation system. Despite all the necessary qualifications, however, the fact remains that the innovative dynamism that could once claim to be capitalism's greatest strength has now become a problem for it.

When there is a significant period of time between the commercialisation of innovations by leading capitals and the catching up of their competitors, technological dynamism and economic dynamism are strongly correlated. The

11 See Perez 2002, Chapter 2.

more this time is compressed, the weaker the correlation. Today as soon as an innovation promising to be exceptionally profitable is developed in one region of the world, national innovation systems across the global tend to be mobilised, hoping to get a piece of the action. Not all will succeed. But enough are likely to succeed to assert a systematic tendency in the world market today for excess productivity capacity (in Marxian terminology, an *overaccumulation* of investment in fixed capital) to arise in the most technologically dynamic sectors significantly sooner than ever before, setting off a decline in the rate of profit. As the prospect of high profits from innovations for extended periods of time declines, rates of investment in industrial and commercial capital tend to decline as well. *While there are still only a relatively few effective national innovation systems in place in the world market, from the standpoint of valorisation (the transformation of M into M') there are now too many.*

So-called 'golden ages' of capitalism have occurred in territories whose capitals enjoyed competitive advantages in the world market for many decades through actualising the commercial potential of a technological revolution.¹² Short of a global catastrophe that destroys most national innovation systems while somehow miraculously leaving that one or two intact, no set of capitals will ever enjoy this privileged position again. The conclusion is stark but unavoidable: *there will be no more 'golden ages' of capitalist development.*

Capitalism has reached this historical limit as a dynamic system, not because there is too little innovation, but because there is too much. The problem is not a 'savings glut' in countries with trade surpluses or a decline in the rate of important innovations.¹³ The fundamental root of the tendency is the erosion of opportunities to appropriate surplus profits from commercialised innovations for extended periods of time, due to a dominant tendency for overaccumulation difficulties to arise faster and persist longer in contemporary capitalism in even the most technologically dynamic sectors.¹⁴

This conclusion undermines the hopes of progressive defenders of capitalism in two ways. It undercuts the plausibility of their project. And it shows just how much proponents of that project have underestimated the resistance it would face.

¹² Arrighi 1994; Perez 2002, Chapter 12.

¹³ Robert Gordon's thesis (2016) that the 'rise and fall' of the US is due to the paucity of important innovations is mistaken in use-value terms (the internet and machine learning aren't incalculably important from a world historical perspective?) and overlooks the utter centrality of the value dimension in capitalism.

¹⁴ See Brenner 2006.

The intuitive plausibility of the progressive project to institute 'capitalism with a human face' rests in large measure on the historical experience of 'golden age' periods when the benefits of innovative and economic dynamism became more widely diffused than they had been previously. The most radical social democratic proposal today is to use the immense power of central banks (and of the US Federal Reserve) to create massive amounts of credit money *ex nihilo* to publicly fund the development and employment of so-called green technologies. The expectation is that implementing this agenda could spur a new golden age of inclusive economic growth.¹⁵

Suppose for the sake of the argument that national innovation systems were mobilised to develop environmentally benign technologies, with generous subsidies provided for units of capital commercialising and employing them. This too would tend to generate serious overaccumulation difficulties far sooner than previous technological revolutions, well before any 'golden age' arose. In principle, increased public spending could compensate for the resulting low rates of private sector investment. But the amount of investment required, and the indefinite length of time it would be required for, would constitute a radical socialisation of investment, provoking capital flight, capital strikes, the use of media to foster social divisions. The social democratic project of providing background conditions nudging private capital investments to socially responsible paths would have to either accept defeat or embrace the socialist project of dismantling the property and production relations of capitalism.

The failure to comprehend how capitalism has been transformed also leads to a fatal underestimation of the relentless pressure pushing contemporary capitalism down paths progressive reformers vehemently oppose. The valorisation imperative does not lose a bit of force when the (supposedly) 'healthy' form of capital accumulation based on producing better products at lower cost is restricted by the proliferation of national innovation systems. M must still be transformed into M'. There have always been less 'healthy' ways of bringing about that transformation. In the present period, they are and will remain predominate.

From capital's standpoint there is only one relevant question: How can high profits be won when the time in which innovations can generate significant competitive advantages tends to be greatly compressed? One answer is to reduce labour's share of national income (less politely, to increase the rate of

15 See Kelton 2020, Hockett 2020, and Duncan 2022.

exploitation). This requires an intensified *war on labour* to extend the workday, replace skilled high-waged workers with increasingly 'intelligent' machinery, make more forms of employment temporary and part-time, continue investment in low-waged regions, aggressively resist unionisation efforts, and so on.

The coercive powers of the state can be used to create artificial monopolies by bestowing *intellectual property rights*. When such rights are extended in scope and enforcement, high profits can be appropriated by some units of capital from innovations for an extended period, despite the fact that other capitals could match the innovation fairly quickly.

The *unprecedented explosion of liquidity through the creation of credit money* by banks and the metastasising shadow banking system, accommodated by central banks (especially the Federal Reserve, in many respects the de facto central bank of the world), has also proven indispensable to the path forward for capital in a period of persisting overaccumulation threats. Increased liquidity has enabled productive capacity to be absorbed – privately undertaken production to be validated as (indirectly) social production – to a greater extent than otherwise would have been the case. Units of capital that would otherwise have been devalued or dismantled have been able to continue operating.

Given the persisting threat of excess productive capacity in non-financial sectors, much of the massive explosion of credit money created in the financial sector has remained circulating within that sector. This *financialisation* has allowed speculative bubbles to arise, along with a generalised inflation of financial assets. The present prices of financial assets are increasingly decoupled from realistic estimates of their long-term prospects. But as long as this dynamic persists M invested in financial assets can be transformed into M'. So far, at least, when speculative bubbles have burst central banks have quickly restored liquidity to the financial sector, enabling this 'unhealthy' form of accumulation to continue.

Other pernicious aspects of contemporary capitalism could be mentioned here, such as the increased surveillance of workers and consumers, increased corporate control of media, increased tax avoidance, the continuing madness of capitalism's 'great acceleration' of depletion and wastes, and so on. But the point should be clear enough. It is easy to call for public policies that end the war on labour, end monopoly power, end trapping citizens and nations in debt, end government bailouts of speculators, and all the other aspects of contemporary capitalism progressives decry. But we are now in a period when the supposedly 'healthy' form of capitalist development is not on offer for the most part.

The stark choice posed by Rosa Luxemburg is more relevant than ever: 'Socialism or barbarism!'¹⁶ Luxemburg's thesis can be accepted without denying that many social formations proclaimed as paradigms of 'socialism' have themselves been barbaric. It would be a tragic mistake, however, to conclude that capitalism must be affirmed despite everything on the grounds that there is no feasible better alternative.

It would also be mistaken to think that 'market socialism' offers an adequate theoretical and practical alternative. Models of market socialism retain generalised commodity production and exchange, while assuming that public policies are able to reverse every tendency towards social pathologies generated by generalised commodity production and exchange. But when commodity production and exchange are generalised the resulting dialectic of universality and particularity in market societies is flawed in both directions. As the particular interests of one individual, enterprise, or territory are set apart from others in competition for market advantages, the centrifugal forces of particularity are held in check by the abstract unifying power of 'capital', emerging 'behind the backs' of market agents as a higher-order abstract universal. Capital reigns, despite the absence of a capitalist class, imposing its abstract imperatives (Commodify! Monetarise! Valorise!) on the social world from which it has emerged.

The heart of this book has been a contribution to the ongoing collective discussion about a socialism that would be a feasible and superior alternative to capitalist market societies (including its social democratic variant), so-called state socialism, and market socialism. *Republican socialism* is an appropriate term for this alternative, combining self-governance without (personal or impersonal) domination with socialised production for democratically determined social needs.

The proposals for a socialist constitution presented in Chapter 4 express a collective commitment to establish a framework and system of social practices enabling the 'ruling principle' of the 'full and free development of every person' to be materially actualised. Specific principles that are part of the core of this project include the fundamental demand for substantial freedom and equality throughout social life. The two 'solidarity constraints' (or something like them) are also essential in a society oriented towards human flourishing. For every individual to have the same chance for full and free development no matter where they were born or where they presently live, every area in the socialist world must have the same per capita share of funds for investment. And social

16 Luxemburg 1996.

agents in one place cannot be permitted to impose an environmental footprint greater than that community's per capita share of the aggregate footprint compatible with maintaining planetary states conducive to human flourishing.

These principles do not come out of thin air. They are the results of centuries of emancipatory struggles against historical forms of oppression and exploitation. They articulate a contestable and revisable understanding of what emancipatory struggles have been struggling towards. The redemption of the past spoken of by Benjamin and Bloch demands that we act today and tomorrow to give these principles material actuality.

2 The Republican Socialist Model: A Summary

For the ruling principles of republican socialism to be actualised, individuals must be free to pursue the sorts of lives they freely choose to live consistent with universal solidarity, cooperating with others in voluntary associations and institutions of collective self-governance. These activities can only occur if individuals and groups have the requisite capabilities, just as their capabilities are developed through these sorts of activities. A core part of the socialist project, then, is to structure social life to ensure that all social individuals have access to the resources they need to develop their essential capabilities and to engage in the activities that constitute their flourishing. Chapters 5–11 proposed how production for social needs might be accomplished, beginning with local production for local needs.

Needs vary widely in different historical and cultural contexts. For our purposes, however, they can be grouped in three general categories. There are, first, the *universal₁ needs* all members of a local community have for the social consumption goods enabling a flourishing community life. Familiar examples of these goods include infrastructure (roads, energy and communication networks), public buildings (hospitals, schools, recreation centres), and parks. These contrast with the *universal₂ needs* that all individuals have for the goods required to flourish as embodied social individuals. Food, shelter, clothing, education, health care, opportunities for cultural enrichment, play, and other so-called 'basic' needs fit under this heading. Finally, there are the *particular needs* for the particular goods required by specific individuals to lead the specific sorts of lives they want to live.

In the model of republican socialism considered here, the first social organisations considered were Community Associations, representative bodies whose members are randomly selected from the local community. Each is charged with assessing (in both qualitative and quantitative terms) how well

a specific category of needs has been addressed in the previous period (here taken to be five years), and with making recommendations regarding the production for that category of needs in the coming period. Community Activist Groups play an important role in ensuring that Associations remain connected to community concerns. Algorithms projecting future needs from patterns in relevant data also play an important role. But in socialism, as in any human society, the future will not be like the past in crucial relevant respects. Members of Community Associations, for example, must attempt to anticipate how social needs might evolve in their community as foreseeable innovations become available.

When each Community Association has accomplished its tasks, they meet together to fix priorities across the three categories. They then work with the elected members of the local Democratic Assembly to determine the strongest alternative sets of competing priorities. When agreement has been reached the alternatives are proposed for public discussion in a series of open in-person and virtual public forums. At the conclusion of public deliberations, a referendum decides the priorities for the coming period, including both specific goods (a bridge here, a new school there) and the sorts of goods needed in the community in general.

The important roles assigned to representative bodies avoids the danger of overburdening social individuals with the demands on their time and effort that would be imposed on them by continuous participatory democracy. The danger of these representative bodies becoming an alien state apparatus is avoided by the mechanisms for selecting their members: (self-selection (Community Activist Groups), determination by lot (Community Associations), and direct election (Democratic Assemblies), by the limited terms of the members of Community Associations and Democratic Assemblies, and by having those serving in Community Associations and Democratic Assemblies subject to recall while receiving only average worker income.¹⁷ Most importantly, the process of democratically determining social needs culminates with the direct participatory democracy of public forums and referendums. This places the ultimate power to define priorities of social needs where it belongs, with the associated members of the community as a whole.

¹⁷ Marx endorsed these policies in his essay on the Paris Commune (Marx 1986a, pp. 331–2). The model proposed here, however, does not include limiting representatives in Democratic Assemblies to carrying out mandates given to them by their constituents, a measure Marx supported. The open exchange of particular perspectives in a Democratic Assembly tends to enable a more universal perspective to emerge than is the case when members of the Assembly can only repeat the particular instructions received from a particular group of constituents.

For the foreseeable future, formally organised units of production and distribution will be necessary to ensure that democratically determined needs for various types of goods are addressed effectively.¹⁸ In the model of republican socialism, these units are self-governing Production Collectives.¹⁹

Production Collectives would not be truly self-governing if they were ordered to undertake specific forms of production by some external higher authority. But the socialist project would also not be furthered if they produced whatever they wanted, whenever they wanted, regardless of social needs. The goal must be to mobilise the free creative intelligence of members of particular Production Collectives while simultaneously furthering the general social good. Both goals can be accomplished if 1) the members of Collectives themselves decide how they can best address social needs, taking into account the productive apparatus they have in place (or could relatively easily obtain) and the embodied skills they possess (or could relatively easily develop); 2) they request the social funding they anticipate will be required to produce along those lines in the coming period; 3) decisions regarding the allocation of social funding for production are based on the relative strengths of Collectives' proposals from the standpoint of addressing social needs, and finally 4) Production Collectives receiving funding generally live up to their commitments. Within the institutional framework and systems of social practices of republican socialism all four conditions necessarily tend to be fulfilled.

A key feature of republican socialism is self-governance in workplaces, but this does not necessarily mean that all members of workplaces decide about all issues all the time. (That arrangement may be suited to relatively small Collectives.) Workers can choose to delegate the day-to-day running of the enterprise to an elected Worker Council or to elected managers, while retaining final say on the most important matters (such as the content of requests for social funding).

18 Since the goal of production in socialism is not met until produced goods and services are distributed to those who need them, 'production' has often been used in this work in a broad sense incorporating both production (in a narrower sense) and distribution together. Similarly, 'goods' has often been used in a broad sense incorporating both goods (in a narrower sense) and services.

19 There are two types of Worker Collectives in the model: Production Collectives and institutions of collective self-governance not directly involved in production and distribution of goods (Democratic Assemblies, Community Associations, etc.). In the latter, no less than the former, ultimate authority rests with the members themselves (institutions of collective self-governance are themselves self-governing). In both self-management is combined with social oversight.

Initial funding requests of Production Collectives are evaluated by a local Producer Review Board, a national Sector Agency, and a Research Centre specialising in environmental assessments. The members of the first two organisations are themselves workers, selected randomly from among the set of those nominated by fellow workers in the same locality or sector, respectfully. The members of the Research Centre have extensive backgrounds in environmental sciences. Production Collectives are then free to revise their requests if they wish. Final proposals are then forwarded for consideration for social investment, along with the final assessments of the relevant Producer Review Board, Sector Agency, and Research Centre.

Decisions about social funding are not technical matters that can be left to sophisticated algorithms applied to enormous data bases by machines with vast processing power. They are inherently political decisions, demanding an explicitly political process. Most members of the local community would not freely choose to devote massive amounts of time and effort to acquire the information required to make informed decisions about every request for social funding. Rather than impose the unrealistically high burdens of direct participatory democracy here, it is better to delegate these decisions to another sort of representative body, Social Investment Centres. Their members have considerable social power. It is immensely important that there is no systematic tendency for that power to be abused in republican socialism. The model defended here includes several features to discourage abuses from occurring and quickly reverse any that may occur.

A number of measures ensure that the members of Social Investment Centres are not and cannot become a self-selecting ruling stratum. First, they are selected randomly from the set of those who have held positions of authority in other socialist institutions (Community Associations, Democratic Assemblies, Production Collectives, Producer Review Boards, Sector Agencies, and so on) and were then nominated by those they had authority over. This procedure has the added benefit that different members of Centres will have concrete experiences of different dimensions of social life. Second, the members of Centres serve for limited terms. Third, the funding requests a specific Investment Centre considers are randomly assigned, discouraging favouritism. Finally, the entire process of allocating social investment funds is transparent. The general and specific social needs that have been determined as social priorities are a matter of public record. So are requests for social funding and the assessments of those requests by teams of workers from the relevant local community and sector and by environmental scientists. In addition, Centres must make their reasons for granting or withholding social funding in particular cases public. In this context if members of a Social Investment Centre abused

their authority it would almost instantly be widely noted, provoking demands that Democratic Assemblies and the socialist Judicial system take effective corrective measures.

We do not have to make the implausible assumption that correct decisions will always be made to affirm that the dominant tendency in this model will be for funding decisions to be based on reasonable assessments of how the full and free development of every individual can best be furthered in the coming period.

In some cases, Production Collectives receiving social funding will have made commitments to produce specific goods. In others, the commitment will be a more indeterminate obligation to produce an estimated quantity of goods addressing a specific subset of social needs, with the specific products left to the member of the funded Collectives to decide, mobilising their local and tacit knowledge. In either case decisions regarding the production goods used, the suppliers from whom production goods are acquired, the social organisation of the labour process, the distribution of income among members, and so on, are left to the self-governing Production Collectives themselves. Final judgements regarding which products do in fact address social needs most adequately are made by the social agents whose needs are to be addressed, expressed in their use of income to acquire products.

Talk in Chapters 5 and 6 of funding requests, allocations of social funds, the use of investment funds to acquire inputs, and the use of income to acquire consumption goods makes it clear that something like 'money' is included in the model. Market socialists are correct, I believe, that this is required in a large-scale and complex social world where enterprises are not commanded what to produce and consumers are not told what products they must use. Does this make the model of socialism under discussion a variant of market socialism? As Chapter 7 explained in detail, the answer is an emphatic 'No!'

In some versions of market socialism, units of production are privately owned by investors, with ownership of equity equitably dispersed to eliminate capitalists as a distinct class. In others, units of production are self-managed Worker Cooperatives. In either case, market competition for profits is generalised. In both cases, the social world is one of 'capital without capitalists', with capital an alien power imposing its imperatives on the society from which it has emerged. In our model, in contrast, all social funding for social production is socialised, directed to social ends rather to valorisation as an alien end in itself. Units of production do not compete against other units to appropriate profits. Units do not privately control retained earnings, using those earnings to invest in means of production and increase the income of their members.

The model of republican socialism defended here also has no place for market prices. Max Weber and other advocates of the capitalist system are quite right to insist that rational choices among possible products are not possible if the relative social costs and social benefits of their production are ignored. But they do not take the fact that market prices allow only an extremely partial calculation of a very restricted range of costs and benefits seriously enough. The restrictions are not socially neutral. Social benefits to some (those with a critical mass of investment funds and disposable income) matter tremendously; social costs to others (for example, low-income neighbourhoods treated as sacrifice zones for polluting industries) are not taken into account at all. The pervasive use of such a limited and distorted measure is a political matter. It is a social fact, not an immutable element of the human condition.

Chapters 5 and 7 outlined how an alternative accounting system could be socially constituted, taking social benefits and social costs into account far more comprehensively than any system of market prices could do. Articulating and attaining social benefits is a central focus of socialist indicative planning process. Social costs – in specific, the opportunity costs, social costs in terms of time labouring in the ‘realm of necessity’, and environmental costs – are the other central focus of the indicative planning process, with the latter two determining the ‘prices’ of production goods and goods for individual and social consumption. This system is admittedly imperfect; social costs and benefits of production today will be much clearer in the future, and the uncertainty of the future is an immutable element of the human condition. But this alternative system is workable, more comprehensive, and significantly less distorting than the pricing system of any market society.

While the model makes use of something money-like, it is not the money of market societies. A case could be made that it would be better if a different term were used (such as ‘points’) or perhaps scare quotes (‘money’), or an awkward expression like ‘quasi-money’. It doesn’t matter much what term is used. Critics of the model are sure to claim that the need to resort to ‘points’ (or ‘money’ or ‘quasi-money’) shows that there is no acceptable alternative to the money of market societies. It is better to confront that claim explicitly than to avoid the issue. Chapter 7 explained how ‘money’ in the model is neither a general equivalent nor a store of value for enterprises or wealthy investors to accumulate over time. It does not grant private holders social power over the labour of others and it does not allow wildly disproportionate influence over the political life of the community. It is most emphatically not an end in itself. Its accumulation is not the ultimate purpose of the society as a whole. It does not have an impersonal power to subordinate the pursuit of human ends. It is, in short, not the money of generalised commodity production and exchange.

It is what apologists say it is (or could be) in market societies, but never is (and cannot ever be): a means for simultaneously furthering the good of society as a whole and its individual members.

Moving from production for social needs on the local level to regional, national, and international levels obviously vastly increases the scope of the model. Chapters 8 and 9 explained how the additional complexity is accommodated to a considerable extent by extrapolating the framework of production for social needs already considered on the local level. Community Activist Groups operate on all levels of socialist civil society, regional, national, and international as well as local. Community Associations are formed on each level, with members again selected randomly from the relevant area. Parallel to local processes, these Associations evaluate how the three categories of needs have been addressed on the regional, national, or global level and negotiate with the relevant Democratic Assembly to formulate the main alternative sets of priorities. After a period of public deliberation within the relevant (regional, national, or international) community, a set of priorities is selected in a referendum.

Production Collectives that wish to address social needs on regional, national, or international levels submit requests for social funding to regional, national, or international Social Investment Centres, respectively, accompanied by evaluations of the proposals by regional, national, or international teams of workers from the relevant community (regional, national, and international Production Review Boards), sector, and environmental specialisations. On these levels too units of production do not appropriate retained earnings to invest or distribute to members as additional income. The allocation of regional, national, and international social investment and social income is *socialised*; all funding is social funding.

The two solidarity constraints continue to hold on these higher levels. All regions within a nation, and all nations within the socialist federation of nations, have access to the same share of funds per capita to distribute to enterprises for investment and social agents for consumption. And the environmental footprint of each is limited to their equal share per capita of an aggregate human footprint activity compatible with maintaining planetary conditions conducive to human flourishing.

As was the case on the local level, the members of Production Collectives receiving funding decide for themselves the products best enabling them to fulfil the commitments made in their requests, along with the means of production they use, the social organisation of their labour processes, the distribution of income within the Collective, and so on. Whether products do in fact address social needs adequately is ultimately be left to the agents and groups whose

needs they are, expressed in their allocations of investment funds and income and their subsequent evaluations of them.

Besides these relatively straightforward extrapolations of the institutions and social practices of production for social needs on the local level, three major complications arise from extending the model.

There is, first, a need for a 'vertical' coordination of decision-making among Social Investment Centres on different levels to establish and maintain regional, national, and international supply chains.²⁰ This can be accomplished by staggering the planning periods of the different levels. When one set of Social Investment Centres made allocations, those decisions could then take into account the enterprises already funded on different levels that were (or could be) part of existing (or future) supply chains. Establishing and maintaining supply chains integrating enterprises operating on local, regional, national, and international levels, however, is not the responsibility of Social Investment Centres alone. The main initiative lies with Production Collectives themselves to establish and maintain formal and informal networks across different levels, aided by co-workers in Sector Agencies. Decisions by Social Investment Centres in general simply confirm whether the networks enterprises have established or are in the process of establishing among themselves are or will likely be effectively directed to addressing democratically determined social needs.

A second complication from incorporating higher levels in the model concerns the regional, national, and international innovation systems required for the innovative dynamism of republican socialism. Few aspects of science and technology today are free of restrictions and distortions imposed by capital's imperatives. They have been weapons in interclass struggle, competition among capitals, and geopolitical power conflicts. But just as the limits and distortions of capitalist production, capitalist culture, and capitalist democracy do not justify a blanket rejection of production, culture, or democracy, the limits and distortions of capitalist science and technology do not justify a blanket rejection of them either. The full and free development of every individual requires forms of science and technology capable of generating product innovations users freely – in full knowledge of all relevant available information – regard as better suited to the sorts of lives they wish to live, as well as process innovations that lower the social and environmental costs of production while

20 As discussed in Chapter 6, a 'horizontal' coordination of the allocation of funds to units of production is required on the local level to ensure that the full range of democratically determined social priorities is adequately covered. The requirement for horizontal coordination of social investments on the regional, national, and international level is a relatively straightforward extrapolation from the local level.

enhancing the lives of those engaged in production. These goals can be attained within a republican socialist framework that includes a system of self-managed Research Centres on regional, national, and international levels directed to basic research, long term research and development, and short-term development.

As with other types of Worker Collectives, members of Research Centres decide for themselves their leadership, the selection of new members, how income is distributed within the Collective, the specific projects worked on, and so on. Like other Collectives, Research Centres do not have a right to continue functioning indefinitely regarding of how effectively they contributed to social production for social needs.²¹ They too have to request funding for the coming period from specialised Social Investment Centres. Their record of cooperation with Community Activist Groups, Community Associations, Democratic Assemblies, Production Collectives, and Sector Agencies regarding the diffusion of innovations and the determination of future paths of research and development is a central factor in funding decisions. The regular use of science juries as described in Chapter 9 strengthens the tendency for science and technology in socialism to address democratically determined social needs.

Consistent with other aspects of the socialist model, every region and nation must have the same per capita share of funds for its regional and national innovation systems. It would also be appropriate for the international Democratic Assembly to establish a percentage of those funds to be set aside for 'blue skies' research that has no foreseeable social effects but is intrinsically worthwhile, with another percentage set aside to support heterodox research projects outside the dominant paradigms of the day.

The third and final complication introduced on higher levels of the model is the need for an international Social Transaction Centre with national, regional, and local branches. This feature of the model incorporates the important moments of truth in Modern Monetary Theory (MMT) while overcoming its limitations.²²

MMT theorists focus on how the spending of a sovereign state with a domestic currency is not limited by tax revenues or the government bonds it has sold. Military expenditures and bailouts of the financial sector when a financial crisis erupts, for example, are not postponed until the state has sufficient tax revenues or has sold sufficient bonds. The Central Bank simply enters

21 Including the social need we have as intelligent animals for knowledge about our world – from the cosmos to the quantum level, and everything in-between – that has no foreseeable practical consequences.

22 Kelton (2020) and Wray (2012) provide comprehensive overviews of the position.

a number in the Treasury Department's account in return for an IOU that can be rolled over indefinitely. This creates money out of nothing that can then be transferred to the accounts of suppliers of military equipment or financial firms that would otherwise be insolvent. The taxes and bond sales come later and serve to maintain the illusion that state spending is constrained in ways analogous to the budget constraints of households and private firms.

MMT theorists quickly add that they are not saying that infinite amounts of money can be created at the government's whim without problem. At any given point in time, non-monetary resources (raw materials, means of production, labour) are limited in the national economy. If these resources are already fully mobilised, any additional creation of money will have inflationary consequences, with too much money chasing too few goods.²³ But as long as there is slack in the economy, money can be created by the state to bring about full employment at decent wages (with the government itself the employer of last resort), anti-poverty programmes, a 'green new deal', and so on. The familiar complaints that such programmes are unaffordable, and that only irresponsible governments spend more than their tax revenues rest on ideological delusions. To reject progressive policies on the grounds that they cannot be paid for without increasing taxes or expanding the deficit is to uncritically accept 'the deficit myth' used to thwart progressive agendas.

There is much to question here, but one point must suffice. The MMT agenda is a variant of social democracy, based on the assumption that the most significant problems of the capitalist social order can be overcome without a fundamental change in property and production relations, so long as there is sufficient political will to do so. This is simply not the case.²⁴ It may not be *logically* impossible for there to be full employment with decent wages throughout the capitalist world system, just as it is not logically impossible for a system of slavery to treat all slaves humanely. But from a practical standpoint the one is as pointless to imagine happening as the other. Lasting and universal full employment at decent wages would shift the balance of power in the capital/wage labour relationship in labour's favour past the point compatible with the reproduction of the relationship. The power of capital's representatives in labour markets, their power over the labour process, over the social surplus, over the state and the cultural milieu, would all necessarily tend to erode over time. Anticipating these developments, those owning and controlling a

23 While taxation is not necessary for state spending in the MMT framework, it does have the important role of checking inflation by subtracting money from the economy.

24 Smith 2017a.

significant amount of investment capital would surely mobilise their considerable economic, political, and cultural power to prevent them from occurring.²⁵ Historical evidence suggests that more than a few would be willing to unleash extra-legal private violence to maintain their prerogatives. In the face of this opposition, the abstract possibility of Central Banks creating monetary resources to support full employment at decent wages is irrelevant. The possibility will not be actualised so long as the property and production relationships of capital remain in place.

Matters would be quite different, however, if social relationships of republican socialism were instituted. The model presented in this book makes use of something like money. As MMT teaches, this 'money' is a social fact, created from nothing by simply writing numbers down in accounts. There is, after all, nothing 'natural' about letting private enterprises like banks or near-banks have a private power to create the public resource of a socially accepted unit of account. In republican socialism such privatised social power has no place.

By writing numbers in the accounts of local Production Collectives local Social Investment Centres provide those Collectives with funds to invest in acquiring means of production and with income for their members to use to obtain means of consumption. Unlike the social agents running banks and shadow banks, the members of Social Investment Centres are selected in a social process, receive a mandate to pursue social ends, and must submit all decisions and the reasoning behind them to scrutiny by both the public at large and specific institutions of socialist self-governance (with the latter having power to intervene if members' pursuit of private interests were to conflict with their social obligations).

While these Centres play a somewhat analogous role in the socialist model to banks in capitalism, they do not themselves create the 'money' they disperse. A number is entered in their accounts, from which subtraction is made as allocations are granted to Production Collectives. The initial entries are made by a local branch of the international Social Transaction Centre, which also keeps the accounts of the Production Collectives operating on the local levels, their members, and all others in the region receiving social income (for example, those engaged in socially necessary care labour outside of formally organised Production Collectives and members of Community Agencies charged with acquiring social consumption goods for local communities.) The local Social Transaction Centre subtracts from the accounts of those acquiring goods as it simultaneously adds to the accounts of those providing them.²⁶

25 Kalecki 1971.

26 As we have seen, the latter 'balance' is one consideration taken into account in evaluations

The regional and national-level branches of the Social Transaction Centre play analogous roles in the accounts of Social Investment Centres and the agents and organisations receiving allocations on those higher levels. They also play a key role in ensuring that the two solidarity constraints are respected. It is a relatively simple matter to provide every level of Social Investment Centres with its proportional share of investment funds. In contrast, the relevant branch of the Social Transaction Centre needs the aid of Research Centres specialising in environmental sciences to confirm that each locality and each region also uses up only its allotted share of humanity's allowable environmental footprint, withholding funds when that share is surpassed.

Ultimately, an international Social Transaction Centre creates all 'money' in the socialist system by writing numbers in the accounts of its national branches as well as in the Collectives and social agents operating on the international level.²⁷ It also keeps duplicate accounts of all those held on other levels by other Transaction Centres. That is done to ensure that the two solidarity constraints are maintained throughout the socialist world. And it is done so that the Centre has direct access to data needed to establish and maintain a stock and flow of quasi-money within the range required for a socialist society to reproduce itself over time. This is a challenging task, one that the closest thing to a world bank in contemporary capitalism – the US Federal Reserve, which oversees stocks and flows of dollars, the closest thing to world money today – does not come close to accomplishing. But the expertise and technological tools needed for fulfilling the task are extrapolations from those found in leading Central Banks today.

It is legitimate to wonder whether granting so much power to a global organisation could lead to a despotic world state incompatible with the professed principles of republican socialism. It would not. Its members are elected, subject to recall, and do not have the power to determine specific allocations. As elsewhere in the model, authority is shared rather than concentrated, accountable rather than despotic. (This is part of the 'republican' moment of republican socialism.)

The international Transaction Centre's power is restricted to entering numbers in the accounts of Worker Collectives receiving social funding and the

of a Production Collective's effectiveness in addressing social needs. It does not take the social form of retained earnings for the Collective to dispose of as it wishes.

27 Another problem with MMT is that it supposes that all 'sovereign states' have the same extended scope of policy options as a hegemonic state whose domestic currency is the main form of world money. They do not (this criticism is forcefully stressed in Kapadia 2024). Having a domestic currency is not sufficient to escape the vicious circle trapping regions in subordinate positions in the capitalist world market (see Chapter 2, Section 3.4 above). Escape demands a form of world money that is not a domestic currency (like the

individuals and community organisations receiving income, and then tracking the use of investment funds and income to acquire producer goods, individual consumption goods, and social consumption goods. Neither the Transaction Centre nor its branches have the power to dictate how social funds are allocated between and within international, national, regional, or local levels. Neither the Transaction Centre nor its branches have the power to dictate how these allocations are then used.

The distribution of funds between the international and national levels is decided by the elected international Democratic Assembly, accountable to (and recallable by) international socialist civil society. Allocations of funds on the international level are made by international Social Investment Centres. They too are accountable in ways that ensure their decisions are not arbitrary expressions of their members' particular agendas. Every nation automatically receives its per capita share of remaining funds. The national-level Democratic Assembly – elected and recallable by the national socialist civil society – decides how much will be devoted to national-level production and distribution, national-level Research Centres, and other national-level activities, with national-level Social Investment Centres making the allocations that need to be made. Regional and local dispersion of funds are analogous. This arrangement is not a 'balance of powers' of externally related entities, but rather a system of complementary institutions that prevents any of them from being overburdened or accumulating an excessive degree of social power.

This completes the summary of the formally organised production for social needs as presented in Chapters 5–9. Along with socially necessary care labour undertaken outside formal institutional structures, it forms the core of the so-called 'realm of necessity' in the republican socialist model. Chapter 10 reviewed the case for asserting that social agents would have sufficient incentive to undertake the social labour necessary for social reproduction at a reasonable level of efficiency.

One of the most important features of the model of socialism presented here is a 'politics of time' aiming to free people from necessary social labour while expanding the time they can devote to free activities. The expanding 'realm of freedom' was the topic of Chapter 11. By definition, the realm of freedom in socialism is not formally structured. Despite its radically indeterminacy two essential features can be noted.

dollar) and does not impose austerity in times of greatest need (as the gold standard did). Socialist units of account created by an international Social Transaction Centre meet both criteria.

First, the realm of freedom and the realm of necessity are dialectically interconnected. In capitalism, the supposed freedom of life outside capitalist workplaces tends to be subsumed under capital. So-called leisure activities, for example, tend to be increasingly commodified and to increasingly make our time and attention 'free gifts' to the capital accumulation process. The impersonal domination of capital that pervades the realm of necessity in capitalism pervades what it offers as a realm of freedom. A socialism that eliminates the former simultaneously eliminates the latter.

Second, we have ample empirical evidence to affirm that when an extensive 'knowledge commons' is available, and access to the technologies required to produce and distribute new knowledge goods is widely dispersed (including communication technologies enabling those with shared interests to communicate quickly and cheaply), a significant number of people will freely devote time and effort to informally cooperate with others on collective projects generating new knowledge goods. We know as well that those engaged in such activity are often not motivated by monetary returns from selling their products for profit. They may want to satisfy their curiosity, improve their own lives and those of others, or win the respect of those they respect. They do not demand a monetary return for their contributions or regard the products that result as privately owned commodities. They are happy to let the results of their efforts be distributed freely to anyone who wishes to use them. This 'commons-based peer production' plays a crucial role in contemporary capitalism.

It might seem a paradox that a decommodified form of production that is not profit-driven and does not involve the capital/wage labour relationship should play an important role in capitalist economies. But capitalism has *always* relied on 'free gifts' that are not produced within circuits of capital. Commons-based peer production is merely an especially striking example of this dynamic. When subordinated to capital, commons-based peer production will tend to further heteronomy as much if not more than autonomy,²⁸ distort public discourse as much if not more than enriching it,²⁹ and heighten global injustices as much if not more than counteracting them.³⁰

28 Heteronomy is furthered when, for example, open-source software is incorporated in technologies subjecting workers and consumers to continual surveillance by capitalist firms.

29 The 'free gifts' of time and effort made by those posting to Facebook and Twitter have all too easily been incorporated within disinformation campaigns.

30 Consider again how open-source software can be incorporated in knowledge goods in the social form of capitalist commodities packaged in intellectual property claims, profoundly restricting access to those goods in poorer regions.

As the realm of freedom expands in republican socialism, we can assume that there is a systematic tendency for commons-based peer production to expand as well. When the distortions resulting from subsuming commons-based peer production under capital's imperatives are eliminated, its emancipatory potential can finally be fully unleashed, with incalculable gains in autonomy, public discourse, and global justice.

This book has argued that from the perspective of world history, republican socialism would count as a major advance. For the first time in human history, the 'ruling purpose' of the society would be 'the full and free development of every person'. For the first time, 'the development of all human powers as such [would be] the end in itself'. For the first time, 'free individuality, based on the universal development of individuals and on their subordination of their communal, social productivity as their social wealth' could flourish.³¹

One question remains, perhaps the most difficult of them all.

3 How Do We Get There from Here?

Any socialist practice must include a utopian moment, anticipating the future being struggled towards. The anticipation could take the form of the vaguest of intuitions, it could be worked out in extensive detail, or it could be something in-between. However implicit or explicit the anticipation might be, the future is as present in our lives as the past.

The socialist project would be futile if the future it anticipates would not be a true advance over capitalist market societies in the normative respects that matter most. It would be just as futile if the anticipated future were not feasible. I have done my best to show that the model of socialist republicanism presented here, or something close to it in relevant respects, would allow future generations to live flourishing lives beyond what any form of market society can offer. And I have done my best to show that such a future is feasible.³²

Even if these two claims are granted, however, socialist politics would still be merely 'utopian' in a negative sense of the term if there were no path of transition from the capitalism we have now to the socialism we hope to establish. It is not enough to show that collectively creating a better world is abstractly possible in principle. It must be shown to be *objectively* possible in a strong sense in

31 Marx 1973, pp. 708, 158–9. See Lebowitz 2021, Chapter 5.

32 I hope very much hope that readers who are not convinced remain open to the possibility that the fault lies with the weaknesses of this book and not with the socialist project itself.

our concrete historical circumstances. This requires establishing the objective possibility of a vast majority of people developing the consciousness and will to undertake a transition within organisational forms that provide an objective possibility of success.³³

This demand cannot adequately be fulfilled here. This is not simply due to my own limitations with respect to assessing organisational forms, strategies, and tactics, and so on. While the demand seems reasonable and inescapable, in my view it cannot be fulfilled. *We simply do not know the path leading to socialism.* There is no form of organisation, no leadership, no strategy, no set of tactics, that we can appeal to with confidence. The objective possibility of socialism can only be established retroactively, after our collective actions have brought about a new form of social life.

This is not because there is no answer to the ‘What is to be done?’ question. The problem is that there are too many answers, too many things that need to be done, and all of them are double-edged. Every course of action promising to contribute to a transition to socialism may work against that transformation. Those undertaking these actions can never know which dynamic will prove stronger. Some examples of strategic paths follow.

We can begin with the strategy of relentless *theoretical critique*. There will not be a transition to socialism unless the ideological illusions fostered by capitalism are critiqued. The limits and perversity of the way ‘freedom’ and ‘equality’ are defined by capitalism’s apologists must be continually challenged. Deeper, more substantive meanings must be made explicit and defended. The workings of the capitalist system must be systematically examined, uncovering how they undermine the freedom and equality that matter most.

Interpreting the world is necessary. But as Marx so starkly expressed in the eleventh thesis on Feuerbach, the point is to change the world and not merely interpret it. Theoretical critique leaves the world unchanged. The more time and effort are devoted to theorising, the less are available for more direct struggles. The more abstract the theorising, as it often must be, the more distance it has from concrete everyday life. The more scattered and isolated theoreticians undertaking critical theorising are, the more harmless their activity is to capital. Even worse, the presence of heterodox thinkers in civil society

33 There is also the question of the specific steps that could be taken to bring about the actual institutional transition to republican socialism. In my view, however, far too many contingencies will be involved for any particular sequence to be proposed. A sequence that can be followed in one place with one balance of forces will be impossible in another place with a different balance of forces. (For a contrasting view, see Reuten 2023, Part Two.)

and academia seems to provide empirical evidence that capitalism can be open and pluralistic, reinforcing the very claim to legitimacy critical theorising aims to critique.

It is not merely the case, then, that those devoted to theoretical practices cannot be confident that their actions are contributing to a transition from capitalism to socialism. They cannot know for sure that their actions do not contribute to undermining the prospects of this transition.

If abstract critical theorising is too distant from everyday life to illuminate a path enabling us to affirm the objective possibility of a transition to socialism, *critical cultural practices* avoid that problem. Aesthetic expressions of cultural critique in music, cinema, murals, graffiti, and so on, can touch the emotional lives of those experiencing them, enriching the lived experience of massive numbers. They can provide a depth of feeling and commitment that abstract ideas cannot match. For a socialist transition to be objectively possible isolated private feelings of dissatisfaction with the established order must be transformed into a shared commitment to resist that order. A vibrant oppositional culture is surely a necessary condition for shared commitments to arise.

It is also the case, however, that counter-cultures mobilising oppositional energies can function as a necessary condition for capitalism's renewal, strengthening the very system they oppose. The carnival, where established social hierarchies are mocked and reversed, is perhaps the paradigmatic instance of a cultural form mobilising latent oppositional energies. From one perspective, the carnival challenges the pretences of the existing order, enabling participants to glimpse the possibility of alternative ways of living beyond given social constraints. From another, however, the carnival merely provides the established social order with a helpful safety valve. Oppositional energies are released in a form leaving everything more or less as it was before. Which perspective is correct? It is pointless to ask. Both are. Which will prove stronger? More often than not, the latter.

When a particular phase of capitalist development has become exhausted, the oppositional energies mobilised in counter-cultural movements have stimulated a transition to a new phase of capitalism overcoming its previous stagnation. Boltanski and Chiapello have plausibly argued that the counter-cultures of the 1960s contributed to a 'new spirit of capitalism' in key sectors of the core of the world market, replacing hierarchical Fordist work structures with a more dynamic network-based form of organisation incorporating employee initiative and relative work autonomy.³⁴ Capitalism's recovery from the stagna-

34 Boltanski and Chiapello 2007.

tion of the 1970s was at least partly due to this appropriation of oppositional energies. Surrealism, which began as one of the most explicitly oppositional movements in cultural history, has become just another tool available to corporate advertisers. While punk and rap artists have provided brilliant instances of anti-capitalist art, they have also given the music industry new paths for the commodification, monetarisation, and valorisation of cultural products and lifestyles. So far, at least, in most places and most times, inspiring murals have contributed to gentrification more than to building vibrant socialist movements.

It is not merely the case, then, that those devoted to cultural practices cannot be confident that their actions are contributing to a transition from capitalism to socialism. They cannot know for sure that their actions do not undermine the prospects of this transition by aiding the reinvigoration of capitalism.

Of course, no historical materialist would ever think that radical social transformation occurs solely through critical theoretical or cultural practices. If the key social relationship defining capitalism is the capital/wage labour relationship, it seems to follow that any transition from capitalism to socialism must centre on class struggles at the workplace against the exploitation of wage labour. So long as the exploitative social relations of capitalism remain in place the prospects for our collective future are bleak indeed. This is not a time for subtlety. The transition to socialism needs to occur as fast as possible. Uniting in a revolutionary workers organisation dedicated to that task would seem to be a practical imperative.

It is also the case, however, that any group calling for a revolutionary overthrow of capitalism is likely condemned to remain a small and ineffectual sect, given the evident absence of a mass revolutionary consciousness and commitment. Merely repeating more often and more fervently the need for a mass revolutionary consciousness to develop has not proven to be a promising path forward. We also know that social activists struggling against other forms of oppression that are not immediately worker issues in a narrow sense will likely be alienated from this agenda. Even activists within labour movements will likely be alienated if immediate struggles for improvements in the lives of workers are set aside to concentrate on quixotic demands for immediate insurrection. These results hamper rather than foster prospects for a socialist transition.³⁵

It is not merely the case, then, that those devoted to forming revolutionary groupuscules cannot be confident that their actions are contributing to a trans-

35 See Marx n.d.

ition from capitalism to socialism. They cannot know for sure that their actions do not lessen the prospects for this transition.

If plotting to bring about a radical alternative to capitalist institutions and social practices is not likely to succeed in present circumstances, perhaps it makes more sense for socialists to prove that alternative institutions and practices superior to capitalism are feasible by building them when and where that can be done.

Capital, as a mere empty form, is *totalising*, but it is never a closed *totality*. There are spaces where we can come together and create social forms of a socialist nature in what Erik Olin Wright termed the 'interstitial' spaces and cracks within the capitalist social structure. Possible examples include consumer coops, battered women's shelters, worker owned and run cooperatives, communes, land-trusts, local social economy services, fair trade associations, and so on.³⁶ The building of such organisations provides participants with a lived experience of forms of life actualising socialist principles, as well as ways to acknowledge and overcome in practice the specificities of different forms of oppression. Concrete evidence is provided that 'another world is possible'.

Unfortunately, it is also the case that in the absence of complementary institutions and practices providing support, these alternative forms are likely to fall far short of the social transformation we require. Cooperatives, for example, cannot rely on the support of investors, banks, and the state that privately owned units of capital rely on. Those surviving despite this often become niche operations serving the relatively affluent. In other cases, alternative organisations in effect provide 'free gifts' to capital. They may, for example, absorb the risks of developing new markets that, once established, allow capitalist enterprises to enter and dominate. Or they may alleviate social problems created in capitalism at minimal cost to capital, providing services that for-profit companies have no interest in providing (e.g. local homeless shelters). Finally, those proving successful in capitalist competition necessarily tend to act more like 'normal' capitalist firms over time.

Whether alternative social organisations fail or succeed, then, in either case it is impossible to know whether they are truly contributing to a transition beyond the capitalist phase of world history, or merely helping to maintain the present social order. Either way, restricting socialist activity to spaces left open by capitalism fragments emancipatory energies in a multiplicity of local concerns, when the objective possibility of a transition to socialism depends upon the objective possibility of the development of revolutionary consciousness on a mass level.

36 Wright 2010, p. 324.

From this perspective perhaps the single most important practical action socialists can do today is to help build mass social movements struggling for transitional demands. Transitional demands are demands for policies social agents presently lacking revolutionary consciousness both believe are worth fighting for and believe can be achieved within capitalism but cannot in fact be realised so long as the production and property relations of capitalism remain in place. As the barrier capital imposes on reasonable demands becomes clear, the political consciousness of those engaged in struggles for the demands can hopefully be radicalised.

Great numbers of people, for example, believe that an environmentally sustainable form of capitalism can be established through legislation and regulations, and that capitalist market societies can eliminate poverty, perhaps through a universal basic income at a decent level. Great numbers believe that capitalism can in principle provide decent wages, safe working conditions, and other reforms that would make the capital/wage labour relationship fair for all workers. Similarly, there are a great number of people with progressive instincts who think it is reasonable to demand of capitalism that all human beings have adequate food, clothing, housing, education, healthcare, access to means of transportation, communication networks, recreational facilities, live in a democratic political system not perverted by the influence of money, and so on.

Socialists must (and do) support these demands and help build mass movements struggling for them. One reason is straightforward: anything that can be done here and now to limit oppressive practices, material deprivations, environmental degradations, and other forms of serious harm, should be done. Such things matter in themselves. The steps may be limited and distorted so long as the property and production relations of capitalism are in place, but that does not make them pointless. They are steps towards the 'full and free development of every individual' nonetheless.

These demands warrant support for a more political reason as well. If socialists remain aloof the struggles that engage mass movements, activists in those movements may become even more distant from the socialist project than they are at present.

In the present context, the crucial matter is that struggles for transitional demands may eventually spur recognition that socialism is a practical imperative. The critique of capital developed by Marx and others shows that capitalism cannot in fact meet any of the demands mentioned above adequately anywhere. It most certainly cannot meet all of them simultaneously throughout the capitalist world system. The more transitional demands are struggled for, the more they may provoke a collective learning process about the limits and distortions of capitalism that leads to a mass revolutionary political consciousness.

Or not. The necessary learning process may not occur on a sufficient scale. Time devoted to particular demands is time not directed towards the transition to socialism, and that might be time we do not have. Different social movements pursuing different agendas may come into conflict with each other, each thinking its concerns are most pressing. Representatives of capital can be relied upon to do what they can to provoke such conflicts, knowing the effectiveness of 'divide and conquer' strategies.

Another set of challenges arises from the fact that capitalism has proven able to make some concessions to some members of some groups in some contexts. Anti-racist struggles may result in a growing stratum of professionals socially distanced from those still facing the full brunt of racialised capitalism; feminist struggles may result in a growing stratum of professional women socially distanced from women providing services to them and their households. Divisions between and within movements against social oppression do not improve the prospects for socialism.

Those prospects can also be seriously harmed when concessions result in reformist politics becoming entrenched. Social movements generally attempt to shape state policies, understanding that the capitalist state is a contradictory site of struggles and not a simple monolith. On occasion, political actions can push state legislation and state regulations in progressive directions. The reforms that can be won in a world where the imperatives of capital are in force (Commodify! Monetarise! Valorise!) cannot but be limited, distorted, and in danger of reversal when the balance of power shifts in capital's favour. But they are on occasion real enough. When participants gain confidence that social change is possible through collective action, the conclusion may be drawn that further reforms are always possible, so long as the political will in their favour is strong enough. Social movements where this view dominates will tend to be incorporated as junior partners within the (capitalist) political party that seems most open to listening to their demands, while moulding them into a form that can be accommodated. Yet others may come to recognise the eventual need for socialism but affirm some variant of the so-called 'parliamentary road to socialism', trusting that incremental reforms will at some point accomplish a transition to socialism. Both paths amount to the demise of the socialist project. One way or the other, what were thought (hoped) to be transitional demands prove to not be. One way or other, the path does not lead to a transition to a new constitution, new political forms of representative democracy, new forms of participatory democracy, new ways of producing, new ways of life.

It seems, then, that socialists must be active in social movements against oppression that do not have a transition to socialism as their objective. It is,

however, not possible to know whether their activities will in fact further the prospects of this transition, while knowing that these actions could very well harm those prospects.

The proper socialist response to many of these practical challenges is clear enough: what is needed is a 'movement of movements' uniting struggles against class exploitation with other movements against other forms of oppression.³⁷ As Nancy Fraser has forcefully argued, it was always a mistake for Marxists to consider these other movements as separate from struggles against capitalism, let alone dismiss them as secondary.³⁸ The oppression of those engaged in social reproduction (housework, raising children, caring for wage workers, the unemployed adults, and the elderly), the expropriation of wealth from structural racism, the erosion of the natural-ecological conditions best suited to human life, the appropriation of public goods socialising costs while profits remain private, are all essentially connected to the exploitation of wage labour in production and the reign of capital. They are all essential to capitalism, and they all must be struggled against if there is to be a successful transition to socialism. Capitalism cannot in principle attain what most activists in the anti-racist and feminist movements want, the freedom from oppression of *all* non-whites and *all* women. Capitalism cannot in principle attain what activists in environmentalist movement want, a social order that does not irrationally undermine its own material preconditions. The anti-racist, feminist, and environmental movements must be seen as neither secondary nor primary to the class movement against exploitation, but as inseparable from it. They must all be united without sacrificing the distinct concerns.

Unfortunately, the term 'movement of movements' is very close to being a dreaded 'empty signifier'. What organisational form should it take? How could it avoid the problem of a small groupuscule at its centre, implausibly claiming to represent the unity of the whole, while simultaneously avoiding an ineffectual fragmentation of different movements in their particularity?

We know what forms a movement of movements must avoid. We can assert with a very high degree of confidence that in the United States the transition to socialism will not be led by the Democratic Party, with its strong ties to finance and other factions of capital. We can be just as certain that it will not take the form of a pseudo-Bolshevik Party with a small leadership claiming privileged knowledge of the proper strategic and tactical response

37 See Harnegger 2015.

38 Fraser 2019.

to every new historical challenge, and the power to dictate what is to be done to party members, expected then to implement their instructions obediently.

A movement of movements must somehow allow different points of view, different practical proposals, to be openly debated. It must enable different local groups to experiment with different strategies and tactics, appropriate to local contexts. It must somehow simultaneously also be unified, so that the different movements in different places do not fragment, do not embrace a particularity preventing them from developing a universal perspective and thereby dooming them to marginalisation by capital's strategy of divide and conquer. It must have effective leaders operating through, and not against, internal democratic deliberations and decision-making. It must somehow go forward in unity, without relying on a cult of personality, or an unaccountable caste operating behind the scenes, to provide the unifying glue.

All true. And all too vague to be helpful.

We have in effect returned full circle to the transition question from which we started. The transition from capitalism to socialism may require the formation of an effective 'movement of movements', but what path will take us from where we are now to the time when such a unified movement of differences can be effective in undertaking a transition? Attempting to answer that question would take us around the same circle again. Theoretical critique, cultural critique, worker struggles at workplaces and picket lines, the construction of alternative forms of social organisation in the gaps of capital's totalising reach, emancipatory demands against forms of social oppression irreducible to the exploitation of wage labour (but thoroughly intertwined with exploitation), can all be part of a path to a movement of movements capable of undertaking the transition. And, again, all these ways the socialist project can go forward (and, I would wager, any others we might consider) pose dangers to the project as well as offering hope.

I do not want to end this work on a negative note. The critique of capital and capitalism inaugurated by Marx and continued since his day is valid. Confidence that there is a feasible socialist alternative to capitalism is justified. And we do know the answer to the 'What is to be done?' question: 'Everything!' The battle against oppression has many fronts. Socialists must be active on all of them.³⁹ Socialists need to be a unifying voice, pointing out that

39 '[T]he much needed forms of *common action* cannot be conceived without a conscious strategic articulation of a *socialist pluralism* which recognises not only the existing differences but also the need for an adequate "division of labour" in the general framework of a socialist offensive' (Mészáros 1995, pp. 695–6). See also Lebowitz 2010, 2021.

all emancipatory struggles are ultimately struggles against exploitation too, just as struggles against class exploitation ultimately must include struggles against all the forms of oppression that prevent the full and free development of *every* individual.

Socialists need to be a voice continually warning that precisely because capital is an empty abstract form it is an amorphous beast. Capitalism is capable of shapeshifting in a manner unknown to slavery or feudalism or any other social order the world has ever seen. There is no victory in emancipatory struggles that does not risk being a defeat, no form of organisation with prospects of success that does not also include the possibility of failure. It was always a mistake to think that there was an immanent necessary logic in historical development making the transition to socialism inevitable. It was always correct that the phrase 'socialism or barbarism' refers to a real choice.

The swimmer far from shore may not know if the beach can be reached. The practical imperative to keep swimming towards it remains. We do not know if socialism can be reached. The practical imperative to move towards it remains undiminished.

Appendix

Institutional Components of the Model

Local

Local Democratic Assembly
Community Associations
Community Activist Groups
Local Production Collectives
(National) Sector Agencies
Local Research Centres
Local Social Investment Centres,
Judicial System
Local Producer Review Boards
Local Community Agencies
Local branch of (International) Social Transaction Centre

Regional

Regional Community Associations
Regional Democratic Assembly
Regional Production Collectives
Regional Social Investment Centres
Regional Producer Review Boards
Regional Social Investment Centres
(National) Sector Agencies
Regional Research Centres
Regional branch of (International) Social Transaction Centre
Regional Judicial System

National and International

National and International Community Associations
National and International Democratic Assemblies
National and International Production Collectives
National and International Judicial Systems
International Sector Agencies
Foreign Transaction Agency
National Citizen Service Collective
National Agencies for Wellbeing (including Agency for Culture, Housing
Agency, Nutrition Agency, Consumer Welfare Agency)

National Agency for Technical Support
National Agency for Public Safety
National branch of (International) Social Transaction Centre
International Social Transaction Centre
International Agency for Public Safety
National and International Research Centres
National Planning Board (National Innovation Planning Board)
Global Research Council

Bibliography

- Adler, Paul 1990, 'Marx, Machines and Skill', *Technology and Culture*, 31, no. 4: 780–812.
- Adler, Paul 2019, *The 99 Percent Economy: How Democratic Socialism Can Overcome the Crises of Capitalism*, New York: Oxford.
- Admati, Anat, and Martin Hellwig 2014, *The Bankers' New Clothes: What's Wrong with Banking and What to Do about It*, Princeton: Princeton University Press.
- Albert, Michael, and Robin Hahnel 1991a, *Looking Forward: Participatory Economics for the Twenty First Century*, Boston: South End Press.
- Albert, Michael, and Robin Hahnel 1991b, *The Political Economy of Participatory Economics*, Princeton: Princeton University Press.
- Alperovitz, Gar, and Lew Daly 2008, *Unjust Deserts: Wealth and Inequality in the Knowledge Economy*, New York: The New Press.
- Anderson, Benedict 1983, *Imagined Communities*, London: Verso.
- Anderson, Elizabeth 1999, 'What is the Point of Equality?', *Ethics*, 109: 287–337.
- Antonio, Robert J., and Brett Clark 2020, 'Social Theory in the Anthropocene: Ecological Crisis and Renewal', in *The Cambridge Handbook of Social Theory*, edited by Peter Kivisto, Cambridge: Cambridge University Press.
- Arrighi, Giovanni 1994, *The Long Twentieth Century*, New York: Verso.
- Arthur, Chris 2002, 'Epitaph for the USSR: A Clock without a Spring', *Critique*, 30, no. 1: 91–122.
- Auerswald, Philip, and Lewis Branscomb 2003, *Taking Technical Risks: How Innovators, Managers, and Investors Manage Risk in High-Tech Innovations*, Cambridge, MA: MIT Press.
- Baker, Dean 2004, *Financing Drug Research: What Are the Issues?* Washington, DC: Center for Economic Research. https://cepr.net/documents/publications/intellectual_property_2004_09.pdf.
- Banerjee, Ryan Niladri, and Boris Hofmann 2018, 'The Rise of Zombie Firms: Causes and Consequences', *BIS Quarterly Review*, 23 September. https://www.bis.org/publ/qtrpdf/r_qtr809g.htm?mod=article_inline.
- Barry, Brian 1995, *Justice as Impartiality*, Oxford: Oxford University Press.
- Bastani, Aaron 2020, *Fully Automated Luxury Communism: A Manifesto*, London: Verso.
- Baumol, William 2003, *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism*, Princeton: Princeton University Press.
- Bellamy, Richard 2004, *Political Constitutionalism: A Republican Defense of the Constitutionality of Democracy*, New York: Cambridge University Press.
- Bellofiore, Riccardo 2005, 'Monetary Economics After Wicksell: Alternative Perspectives within the Theory of the Monetary Circuit', in *The Monetary Theory of Produc-*

- tion: Traditions and Perspectives*, edited by Giuseppe Fontana and Riccardo Realfonzo, London: Palgrave Macmillan.
- Benanav, Aaron 2020a, *Automation and the Future of Work*, New York: Verso.
- Benanav, Aaron 2020b, 'How to Make a Pencil', *Logic 12: Commons*. <https://logicmag.io/commons/how-to-make-a-pencil/>
- Benkler, Yochai 2006, *The Wealth of Networks*, New Haven: Yale University Press.
- Bernanke, Ben 2005, *The Global Saving Glut and the US Current Account Deficit*, Washington, DC: The Federal Reserve Board. <https://www.federalreserve.gov/boarddocs/speeches/2005/200503102/>.
- Bernes, Jasper 2013, 'Logistics, Counterlogistics, and the Communist Prospect', *Endnotes*, 3. <https://doi.org/10.1215/00382876-8007653>.
- Bernes, Jasper 2020, 'Planning and Anarchy', *South Atlantic Quarterly*, 119, no. 1: 53–73.
- Bhaskar, Roy 1979, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*, New York: Routledge.
- Birkinbine, Benjamin 2020, *Incorporating the Digital Commons: Corporate Involvement in Free and Open Source Software*, London: University of Westminster Press.
- Blinder, Alan 2013, *After the Music Stopped: The Financial Crisis, the Response, and the Work Ahead*, New York: Penguin.
- Block, Fred, and Matthew R. Keller, 'Where do Innovations Come From?' in *State of Innovation: The US Government's Role in Technology Development*, edited by Fred Block and Matthew R. Keller, Boulder, CO: Paradigm Publishers.
- Boldrin, Michele, and David K. Levine 2008, *Against Intellectual Monopoly*, Cambridge: Cambridge University Press.
- Boltanski, Luc, and Eve Chiapello 2007, *The New Spirit of Capitalism*, New York: Verso.
- Bowles, Samuel, and Herbert Gintis 2011, *A Cooperative Species: Human Reciprocity and Its Evolution*, New York: Oxford University Press.
- Breckman, Walter 1999, *Marx, The Young Hegelians, and the Origins of Radical Social Theory*, New York: Cambridge University Press.
- Brenner, Johanna 2000, *Women and the Politics of Class*, New York: Monthly Review Press.
- Brenner, Robert 2006, *The Economics of Global Turbulence*, New York: Verso.
- Brenner, Robert 2009, 'What's Good for Goldman Sachs is Good for America: The Origins of the Present Crisis', *Center for Social Theory and Comparative History* UCLA. <http://www.sscnet.ucla.edu/issr/cstch/papers/BrennerCrisisTodayOctober2009.pdf>.
- Breznitz, Dan 2021, *Innovation in Real Places: Strategies for Prosperity in an Unforgiving World*, New York: Oxford University Press.
- Brush, Silla 2023, 'BlackRock Assets Rise to \$9.4 Trillion During Mixed Quarter', *Bloomberg*, 14 July. <https://www.bloomberg.com/news/articles/2023-07-14/blackrock-assets-rise-to-9-4-trillion-fueled-by-bull-market#xj4y7vzkq>

- Burbank, Jane, and Frederick Cooper 2010, *Empires in World History*, Princeton: Princeton University Press.
- Callinicos, Alex 2023, *The New Age of Catastrophe*, Cambridge: Polity Press.
- Case, Anne, and Angus Deaton 2020, *Deaths of Despair and the Future of Capitalism*, Princeton: Princeton University Press.
- Chattopadhyay, Paresch 2016, *Marx's Associated Mode of Production: A Critique of Marxism*, New York: Palgrave Macmillan.
- Chomsky, Noam 2004, 'War Crimes and Imperial Fantasies', interview by David Barsamian, *International Socialist Review*, 37, September–October.
- Christophers, Brett 2020, *Rentier Capitalism: Who Owns the Economy, and Who Pays for It?* New York: Verso.
- Clenfield, Jason 2017, 'Zombie Nation', *Bloomberg*, 4 April. <https://www.bloomberg.com/news/articles/2017-04-04/zombie-nation-in-japan-zero-public-companies-went-bust-in-2016>.
- Cockshott, Paul, and Allen Cottrell 1993, *Towards a New Socialism*, Nottingham: Spokesman Books.
- Cockshott, Paul, and Allen Cottrell 1999, *Economic Planning, Computers and Labor Values*. <https://copejournal.com/wp-content/uploads/2015/12/Cockshott-and-Cottrell-Economic-Planning-Computers-and-Labor-Values.pdf>
- Cohen, G.A. 2009, *Rescuing Justice and Equality*, Cambridge, MA: Harvard University Press.
- Copley, Jack 2022, *Governing Financialisation: The Tangled Politics of Financial Liberalisation in Britain*, Oxford: Oxford University Press.
- Crary, Jonathan 2014, *24/7: Capitalism and the End of Sleep*, New York: Verso.
- Credit Suisse 2016, *Credit Suisse Global Wealth Data Bank*, Zurich: Credit Suisse.
- Davidson, Paul 2009, *The Keynes Solution: The Path to Global Economic Prosperity*, New York: Palgrave Macmillan.
- Davis, Mike 1986, *Prisoners of the American Dream*, New York: Verso.
- Debord, Guy 2006, *The Society of the Spectacle*, Oakland: AK Press.
- DeLong, Bradford 2022, *Slouching Towards Utopia*, New York: Basic Books.
- Devine, Pat 1988, *Democracy and Economic Planning: The Political Economy of a Self-governing Society*, Cambridge: Polity Press.
- Devine, Pat 2019, 'Democratic Socialist Planning', in *The Oxford Handbook of Karl Marx*, edited by Matt Vidal, Tony Smith, Tomás Rotta, and Paul Prew, New York: Oxford University Press.
- Dobbs, Richard, Susan Lund, Jonathan Woetzel, and Mina Mutafchieva 2015, *Debt and (Not Much) Deleveraging*, London: McKinsey Global Institute.
- Draper, Hal 1974, 'Marx on Democratic Forms of Government', in *The Socialist Register 1974*, edited by Ralph Miliband and John Saville, London: Merlin Press.
- Duncan, Richard 2012, *The New Depression*, Hoboken, NJ: Wiley.

- Duncan, Richard 2022, *The Money Revolution: How to Finance the Next American Century*, Chichester: Wiley.
- The Economist* 2009, 'Intellectual Property in China: Battle of Ideas', 25 April.
- The Economist* 2013, 'Labour Pains', 31 October. <https://www.economist.com/finance-and-economics/2013/10/31/labour-pains>
- Elson, Diane 1988, 'Market Socialism or Socialisation of the Market?', *New Left Review*, 1172: 3–44.
- Engels, Frederick 1970 [1880], *Socialism: Utopian and Scientific*. <https://www.marxists.org/archive/marx/works/1880/soc-utop/ch01.htm>
- Evans, Fred 2008, *The Multivoiced Body: Society and Communication in the Age of Diversity*, New York: Columbia University Press.
- Evans, James A., Jae-Mahn Shim, and John P.A. Ioannidis 2014. 'Attention to Local Health Burden and the Global Disparity of Health Research', *Plos One*, 1 April. <https://doi.org/10.1371/journal.pone.0090147>.
- Fan, Joseph, Randall Morck, and Bernard Yeung 2011, 'Capitalizing China', *NBER Working Paper* 17687. <https://www.nber.org/papers/w17687>.
- Federici, Silvia 2019, *Re-enchanting the World: Feminism and the Politics of the Commons*, Oakland, CA: PM Press.
- Fishkin, Joseph, and William E. Forbath 2022, *The Anti-Oligarchy Constitution*, Cambridge, MA: Harvard University Press.
- Foster, John Bellamy, and Brett Clark 2020, *The Robbery of Nature*, New York: Monthly Review Press.
- Foster, John Bellamy, and Robert W. McChesney 2014, 'Surveillance Capitalism: Monopoly-Finance Capital, the Military-Industrial Complex, and the Digital Age', *Monthly Review* 66, no. 11: 1–32.
- Fraser, Nancy 2019, 'What Should Socialism Mean in the Twenty-First Century?' in *Beyond Market Dystopia: New Ways of Living* (Socialist Register 2020), edited by Leo Panitch and Greg Albo, London: Merlin Press.
- Fukuyama, Francis 1992, *The End of History and the Last Man*, New York: Free Press.
- Gabriele, Alberto, and Elias Jabbour 2022, *Socialist Economic Development in the 21st Century*, New York: Routledge.
- Galvani, Alison P., Alyssa S. Parpia, Eric M. Foster, Burton H. Singer, and Meagan C. Fitzpatrick 2020, 'Improving the Prognosis of Health Care in the USA', *The Lancet*, 395: 524–33.
- Giménez, Martha 2019, *Marx, Women, and Capitalist Social Reproduction: Marxist Feminist Essays*, Chicago: Haymarket.
- Gordan, Robert 2016, *The Rise and Fall of American Growth: The US Standard of Living since the Civil War*, Princeton: Princeton University Press.
- Gorz, André 1967, *Strategy for Labor*, Boston: Beacon Press.
- Gough, Ian 2020, 'The Case of Universal Basic Services', *LSE Public Policy Review*, 1(2), no. 6: 1–9.

- Gowan, Peter 1999, *The Global Gamble*, New York: Verso.
- Graham, John R., Campbell R. Harvey, and Shiva Rajgopal 2005, 'The Economic Implications of Corporate Financial Reporting', *Journal of Accounting and Economics*, 40: 3–73.
- Graziani, Augusto 2003, *The Monetary Theory of Production*, Cambridge: Cambridge University Press.
- Habermas, Jürgen 2001, *The Postnational Constellation*, edited and translated by Max Pensky, Cambridge, MA: MIT Press.
- Hackman, J. Richard, and Greg R. Oldham 1980, *Work Redesign*, Reading, MA: Addison-Wesley.
- Häggglund, Martin 2019, *This Life: Secular Faith and Spiritual Freedom*, New York: Pantheon.
- Haff, Gordon 2018, *How Open Source Ate Software*, Berkeley: Apress Media.
- Hahnel, Robin 2021, *Democratic Economic Planning*, New York: Routledge.
- Handel, Michael J. 2012, 'Trends in Job Skill Demands in OECD Countries', *OECD Social, Employment and Migration Working Papers*, 143, Paris: OECD.
- Hardt, Michael, and Antonio Negri 2009, *Commonwealth*, Cambridge, MA: Belknap Press.
- Harnecker, Marta 2015, *A World to Build: New Paths toward Twenty-First Century Socialism*, New York: Monthly Review Press.
- Harvey, David 1996, *Justice, Nature and the Geography of Difference*, Malden, MA: Blackwell.
- Harvey, David 2012, *Rebel Cities: From the Right to the City to the Urban Revolution*, New York: Verso.
- Hayek, Friedrich 1935a, 'The Nature and the History of the Problem', in *Collectivist Economic Planning: Critical Studies on the Possibilities of Socialism*, edited by Friedrich A. Hayek, London: Routledge and Kegan Paul.
- Hayek, Friedrich 1935b, 'The Present State of the Debate', in *Collectivist Economic Planning: Critical Studies on the Possibilities of Socialism*, edited by Friedrich A. Hayek, London: Routledge and Kegan Paul.
- Hayek, Friedrich 1976, *Law, Legislation, and Liberty, Volume 2: The Mirage of Social Justice*, Chicago: University of Chicago Press.
- He, Allen, Jessica Pollock, and FCLTGlobal 2023, 'In 2022, Corporate Time Horizons Shorten, Investors' Lengthen', *Harvard Law School Forum on Corporate Governance*, 16 September. <https://corpgov.law.harvard.edu/>.
- Hegel, Georg Wilhelm Friedrich 2008 [1820], *Outlines of the Philosophy of Right*, New York: Oxford University Press.
- Helpman, Elhanan 2004, *The Mystery of Economic Growth*, Cambridge, MA: Belknap Press.
- Hirschman, Albert 1970, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organisations, and States*, Cambridge, MA: Harvard University Press.

- Hockett, Robert 2020, *Financing the Green New Deal*, Ithaca: Cornell University Press.
- Holdren, Nate 2020, *Injury Impoverished: Workplace Accidents, Capitalism, and Law in the Progressive Era*, New York: Cambridge University Press.
- Honneth Axel 2017, *The Idea of Socialism*, Cambridge: Polity Press.
- Hudis, Peter 2013, *Marx's Concept of the Alternative to Capitalism*, Chicago: Haymarket.
- Hudis, Peter 2019, 'Marx's Concept of Socialism', in *The Oxford Handbook of Karl Marx*, edited by Matt Vidal, Tony Smith, Tomás Rotta, and Paul Prew, New York: Oxford University Press.
- Hunter, Rob 2021, 'Marx's Critique and the Constitution of the Capitalist State', in *Research Handbook on Law and Marxism*, edited by Paul O'Connell and Umut Özsu, Northampton: Edward Elgar.
- Hunter, Rob, Rafael Khachaturian, and Eva Nanopoulos (eds) 2023, *Marxism and the Capitalist State: Towards a New Debate*, Cham: Palgrave Macmillan.
- Jorgen, Andrew 2003, 'Consumption and Environmental Degradation: A Cross-National Analysis of the Ecological Footprint', *Social Problems*, 50, no. 3: 374–94.
- Kalecki, Michał 1971 [1943], 'Political Aspects of Full Employment', in *Selected Essays on the Dynamics of the Capitalist Economy*, Cambridge: Cambridge University Press.
- Kant, Immanuel 1991 [1784], 'Idea for a Universal History', in *Kant: Political Writings*, second edition, edited by H.S. Reiss, translated by H.B. Nisbet, Cambridge: Cambridge University Press.
- Kapadia, Anush 2024, *A Political Theory of Money*, New York: Cambridge University Press.
- Keefe, Patrick 2021, *Empire of Pain: Secret History of the Sackler Dynasty*, New York: Doubleday.
- Kelly, Kevin 2010, *What Technology Wants*, New York: Viking.
- Kelton, Stephanie 2020, *The Deficit Myth: Modern Monetary Theory and the Birth of the People's Economy*, New York: Public Affairs.
- Klein, Matthew, and Michael Pettis 2020, *Trade Wars are Class Wars: How Rising Inequality Distorts the Global Economy and Threatens International Peace*, New Haven: Yale University Press.
- Kornai, János 1992, *The Socialist System: The Political Economy of Communism*, Princeton: Princeton University Press.
- Konings, Martijn 2018, *Capital and Time: For a New Critique of Neoliberal Reason*, Stanford: Stanford University Press.
- Krier, Dan 2017, 'Behemoth Revisited: National Socialism and the Trump Administration', *Logos* 16, nos. 1–2. <https://logosjournal.com/2017/behemoth-revisited-national-socialism-and-the-trump-administration/>
- Laibman, David 2022, 'Systematic Socialism: A Model of the Models', *Science and Society*, 86, no. 2: 225–47.

- Lakatos, Imre 1970, 'Falsification and the Methodology of Scientific Research Programmes', in *Criticism and the Growth of Knowledge*, edited by Imre Lakatos and Alan Musgrave, Cambridge: Cambridge University Press.
- Landemore, Hélène 2020, *Open Democracy: Reinventing Popular Rule for the Twenty-First Century*, Princeton: Princeton University Press.
- Lange, Oskar 1936, 'On the Economic Theory of Socialism: Part One', *The Review of Economic Studies*, 4, no. 1: 53–71.
- Lebowitz, Michael 2003, *Beyond Capital: Marx's Political Economy of the Working Class*, second edition, New York: Palgrave Macmillan.
- Lebowitz, Michael 2010, *The Socialist Alternative: Real Human Development*, New York: Monthly Review Press.
- Lebowitz, Michael 2021, *Between Capitalism and Community*, New York: Monthly Review Press.
- Lee, Lisa, and Tom Contillano 2020, 'America's Zombie Companies Rack Up \$2 Trillion of Debt', *Bloomberg*, 16 December. <https://www.bloomberg.com/news/articles/2020-11-17/america-s-zombie-companies-have-racked-up-1-4-trillion-of-debt#xj4y7vzkg>.
- Leipold, Bruno 2017, *Citizen Marx: The Relationship Between Karl Marx and Republicanism*, Unpublished doctoral thesis, University of Oxford. https://ora.ox.ac.uk/objects/uuid:fa034057-08fe-484b-9aaa-20c998b26569/download_file?file_format=application%2Fpdf&safe_filename=Leipold_2017_Citizen_Marx_the.pdf&type_of_work=Thesis
- Leipold, Bruno, Karma Nabulsi, and Stuart White 2020, 'Introduction', in *Radical Republicanism: Recovering the Tradition's Popular Heritage*, edited by Bruno Leipold, Karma Nabulsi, and Stuart White, Oxford: Oxford University Press.
- Levy, Jonathan 2021, *Ages of American Capitalism*, New York: Random House.
- Locke, Richard M., and Rachel L. Wellhausen (eds) 2014, *Production in the Innovation Economy: The MIT Task Force on Production and Innovation*, Cambridge, MA: MIT Press.
- Luxemburg, Rosa 1971a [1918], *On the Spartacus Program*, London: Merlin.
- Luxemburg, Rosa 1971b [1919], 'What Does the Spartacus League Want?' in *Selected Political Writings*, edited by Dick Howard, New York: Monthly Review Press.
- Luxemburg, Rosa 1996 [1915], *The Crisis in German Social Democracy* ['*The Junius Pamphlet*']. <https://www.marxists.org/archive/luxemburg/1915/junius/>.
- Luxemburg, Rosa 2003 [1913], *The Accumulation of Capital*, New York: Routledge.
- MacLean, Nancy 2018, *Democracy in Chains: The Deep History of the Radical Right's Stealth Plan for America*, New York: Penguin.
- Magdoff, Fred, and Chris Williams 2017, *Creating an Ecological Society: Toward a Revolutionary Transformation*, New York: Monthly Review Press.
- Mahendra, Anjali, Robin King, Jillian Du, Ani Dasgupta, Victoria A. Beard, Achilles Kallergis, and Kathleen Schalch 2021, 'Seven Transformations for More Equitable

- and Sustainable Cities', World Resources Report, *Towards a More Equal City*, Washington, DC: World Resources Institute. <https://doi.org/10.46830/wrirpt.19.00124>.
- Malm, Andreas 2023, 'The Future is the Termination Shock: On the Antinomies and Psychopathologies of Geoengineering. Part Two', *Historical Materialism*, 31, no. 1: 3–61.
- Mandarini, Matteo, and Alberto Toscano 2020, 'Planning for Conflict', *The South Atlantic Quarterly*, 119, no. 1: 11–30.
- Mandel, Ernest 1986, 'In Defence of Socialist Planning', *New Left Review*, 1/159: 5–37.
- Mandel, Ernest 1999, *Late Capitalism*, second edition, New York: Verso.
- Manyika, James, Anu Madgavkar, Tilman Tacke, Sven Smit, Lola Woetzel, and Abdulla Abdulaal 2020, *The Social Contract in the 21st Century*, New York: McKinsey Global Institute.
- Marks, Gene 2016, '21 Percent of CEOs are Psychopaths. Only 21 Percent?' *Washington Post*, 16 September. <https://www.washingtonpost.com/news/on-small-business/wp/2016/09/16/gene-marks-21-percent-of-ceos-are-psychopaths-only-21-percent/>.
- Marx, Karl 1973 [1939], *Grundrisse*, New York: Vintage Books.
- Marx, Karl 1975a [1844], 'On the Jewish Question', in *Marx and Engels Collected Works*, Volume 3, New York: International Publishers.
- Marx, Karl 1975b [1844], 'Contribution to the Critique of Hegel's Philosophy of Law. Introduction', in *Marx and Engels Collected Works*, Volume 3, New York: International Publishers.
- Marx, Karl 1976 [1867], *Capital, Volume I*, translated by Ben Fowkes, New York: Penguin.
- Marx, Karl 1978 [1885], *Capital, Volume II*, New York: Penguin.
- Marx, Karl 1981 [1894], *Capital, Volume III*, New York: Penguin.
- Marx, Karl 1986a [1871], 'The Civil War in France', in *Marx and Engels Collected Works*, Volume 22, New York: International Publishers.
- Marx, Karl 1986b, [1939] 'Outlines of the Critique of Political Economy' [*Grundrisse*, beginning], in *Marx and Engels Collected Works*, Volume 28, New York: International Publishers.
- Marx, Karl 1988a, 'Economic Manuscripts 1861–63', in *Marx and Engels Collected Works*, Volume 30, New York: International Publishers.
- Marx, Karl 1988b [1868–70], 'Marx to Sigfrid Meyer and August Vogt, April 9', in *Marx and Engels Collected Works*, Volume 43, New York: International Publishers.
- Marx, Karl 1989 [1875], 'Critique of the Gotha Program', in *Marx and Engels Collected Works*, Volume 24, New York: International Publishers. <https://marxists.architexturez.net/archive/marx/works/1875/gotha/cho1.htm>
- Marx, Karl 1994, 'Economic Manuscript of 1861–63', in *Marx and Engels Collected Works*, Volume 34, New York: International Publishers.
- Marx, Karl n.d. [1874–75], *Conspectus of Bakunin's Statism and Anarchy*. <https://www.marxists.org/archive/marx/works/1874/04/bakunin-notes.htm>

- Marx, Karl, and Frederick Engels 1976a [1845–46], ‘The German Ideology’, in *Marx and Engels Collected Works*, Volume 5, New York: International Publishers.
- Marx, Karl, and Frederick Engels 1976b [1848], ‘The Communist Manifesto’, in *Marx and Engels Collected Works*, Volume 6, New York: International Publishers.
- Mason, Paul 2016, *PostCapitalism: A Guide to Our Future*, New York: Penguin Books.
- Mattick Jr., Paul 2019, *Theory as Critique: Essays on Capital*, Chicago: Haymarket Books.
- Mazzucato, Mariana 2013, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths*, London: Anthem Press.
- McNally, David 1993, *Against the Market: Political Economy, Market Socialism and the Marxian Critique*, London: Verso.
- McNeill, John R., and Peter Engelke 2014, *The Great Acceleration: An Environmental History of the Anthropocene since 1945*, Cambridge, MA: Harvard University Press.
- Mészáros, István 1995, *Beyond Capital: Towards a Theory of Transition*, New York: Monthly Review.
- Milanovic, Branko 2019, *Capitalism, Alone: The Future of the System that Rules the World*, Cambridge, MA: Harvard University Press.
- Mohun, Simon 2009, ‘Aggregate Capital Productivity in the US Economy, 1964–2001’, *Cambridge Journal of Economics*, 33, no. 5: 1023–46.
- Moody, Kim 1997, *Workers in a Lean World*, London: Verso.
- Morozov, Evgeny, 2019, ‘Digital Socialism? The Calculation Debate in the Age of Big Data’, *New Left Review*, 116/117: 33–67.
- Morris, Ian 2010, *Why the West Rules – For Now*, New York: Farrar, Straus and Giroux.
- Moseley, Fred 2015, *Money and Totality: A Macro-Monetary Interpretation of Marx’s Logic in Capital and the End of the ‘Transformation Problem’*, Leiden: Brill.
- Muldoon, James 2022, ‘A Socialist Republican Theory of Freedom and Government’, *European Journal of Political Theory*, 21, no. 1: 47–67.
- Murphy, Liam, and Thomas Nagel 2004, *The Myth of Ownership: Property and Justice*, New York: Oxford.
- Murray, Patrick 2000, ‘Marx’s “Truly Social” Labour Theory of Value. Part 1, Abstract Labour in Marxian Value Theory’, *Historical Materialism*, 6: 27–65.
- Murray, Patrick 2016, *The Mismeasure of Wealth: Essays on Marx and Social Form*, Leiden: Brill.
- National Science Board (United States) 2022, *Science and Engineering Indicators*, April. <https://nces.nsf.gov/pubs/nsb20225>.
- Nelson, Richard (ed.) 1993, *National Innovation Systems*, Oxford: Oxford University Press.
- Neurath, Otto 2006, *Economic Writings: Selections 1904–1945*, edited by Thomas Uebel and Robert Cohen, Dordrecht: Kluwer.
- Noble, David 1977, *America by Design: Science, Technology, and the Rise of Corporate Capitalism*, New York: Knopf.

- Nove, Alexander 1991, *The Economics of Feasible Socialism Revisited*, London: Harper-Collins Academic.
- Nussbaum, Martha C. 2001, *Women and Human Development*, New York: Cambridge University Press.
- OECD 2022, *Main Science and Technology Indicators: Highlights*. <https://www.oecd.org/sti/msti-highlights-march-2022.pdf>
- O'Neill, John 1996, 'Who Won the Socialist Calculation Debate?' *History of Political Thought*, 17, no. 3: 431–42.
- O'Neill, John, and Thad Williamson 2014, *Property-Owning Democracy: Rawls and Beyond*, Hoboken, NJ: Wiley-Blackwell.
- Panitch, Leo, and Greg Albo 2019, *Beyond Market Dystopia: New Ways of Living* (Socialist Register 2020), London: Merlin Press.
- Pannekoek, Anton 1936, *Workers' Councils*. <https://www.marxists.org/archive/pannekoek/1936/councils.htm>
- Pariser, Eli 2011, *The Filter Bubble: What the Internet is Hiding from You*, New York: Penguin.
- Perez, Carlota 2002, *Technological Revolutions and Financial Capital*, Northampton, MA: Edward Elgar.
- Pérotin, Virginie 2012, 'The Performance of Workers' Cooperatives', in *The Cooperative Business Movement, 1950 to the Present*, edited by Patrizia Battilani and Harm G. Schröter, pp. 195–221, New York: Cambridge University Press.
- Phillips, Leigh, and Michael Rozworski 2019, *The People's Republic of Walmart: How the World's Biggest Corporations are Laying the Foundation for Socialism*, New York: Verso.
- Piketty, Thomas 2021, *Time for Socialism: Dispatches from a World on Fire, 2016–2021*, New Haven: Yale Press.
- Pistor, Katharina 2019, *The Code of Capital: How the Law Creates Wealth and Inequality*, Princeton: Princeton University Press.
- Platenkamp, Tim forthcoming, *The Constitution of Socialism*, Leiden: Brill.
- Pogge, Thomas 2010, 'A Critique of the Capability Approach', in *Measuring Justice: Primary Goods and Capabilities*, edited by Harry Brighouse and Ingrid Robeyns, New York: Cambridge University Press.
- Popp-Madsen, Benjamin forthcoming, 'Non-domination and Constituent Power: Socialist Republicanism versus Radical Democracy', *Philosophy and Social Criticism*.
- Poulantzas, Nicos 1975, *Classes in Contemporary Capitalism*, London: New Left Books.
- Quinn, Josephine 2024, *How the World Made the West: A 4,000-Year History*, New York: Random House.
- Rauch, Erik n.d., 'Productivity and the Workweek', *MIT Productivity and the Workweek Project*. <http://groups.csail.mit.edu/mac/users/rauch/worktime/>.

- Rawls, John 1993, *Political Liberalism*, New York: Columbia University Press.
- Rawls, John 2001, *Justice as Fairness: A Restatement*, second edition, Cambridge, MA: Belknap Press.
- Red Hat 2020, *The State of Enterprise Open Source*. https://static.carahsoft.com/concrete/files/5216/1841/0028/Red_Hat_State_of_Enterprise_Open_Source_2021_Combined.pdf
- Reuten, Geert 1991, 'Accumulation of Capital and the Foundation of the Tendency of the Rate of Profit to Fall', *Cambridge Journal of Economics*, 15, no. 1: 79–93.
- Reuten, Geert 2018, 'The Redundant Transformation to Prices of Production: A Marx-Immanent Critique and Reconstruction', in *Marx's Capital: An Unfinishable Project?* edited by Marcel van der Linden and Gerald Hubmann, Leiden: Brill.
- Reuten, Geert 2019, *The Unity of the Capitalist Economy and State: A Systematic-dialectical Exposition of the Capitalist System*, Leiden: Brill. <https://brill.com/view/title/38778> (open access).
- Reuten, Geert 2023, *Design of a Worker Cooperatives Society: An Alternative Beyond Capitalism and Socialism, and The Transition Towards It*, Leiden: Brill.
- Ripple, William et al. 2020, 'World Scientists' Warning of a Climate Emergency', *BioScience*, 71, no. 9: 894–8.
- Roberts, William Clare 2017, *Marx's Inferno*, Princeton: Princeton University Press.
- Rockström, John et al. 2009, 'A Safe Operating Space for Humanity', *Nature*, 461: 472–5.
- Rockström, John et al. 2023, 'Safe and Just Earth Boundaries', *Nature*, 619: 102–11.
- Rodrik, Dani 2012, 'No More Growth Miracles', *Project Syndicate*, 8 August. <https://www.project-syndicate.org/commentary/no-more-growth-miracles-by-dani-rodrik-2012-08>.
- Rodrik, Dani 2015, 'Premature Deindustrialisation', *Working Paper 20935*, Cambridge, MA: National Bureau of Economic Research. <http://www.nber.org/papers/w20935>.
- Roemer, John 1994, *A Future for Socialism*, Cambridge, MA: Harvard University Press.
- Roemer, John 1996, *Equal Shares: Making Market Socialism Work*, London: Verso.
- Rosenberg, Justin 1994, *The Empire of Civil Society: A Critique of the Realist Theory of International Relations*, New York: Verso.
- Roubini, Nouriel 2022, *Megathreats*, New York: Little, Brown and Company.
- Roubini, Nouriel, and Stephen Mihm 2010, *Crisis Economics: A Crash Course in the Future of Finance*, New York: Penguin.
- Saito, Kohei 2022, *Marx in the Anthropocene: Towards the Idea of Degrowth Communism*, New York: Cambridge University Press.
- Sandel, Michael 1982, *Liberalism and the Limits of Justice*, Cambridge, MA: Harvard University Press.
- Saros, Daniel 2014, *Information Technology and Socialist Construction: The End of Capital and the Transition to Socialism*, New York: Routledge.
- Schuler, Jeanne A., and Patrick Murray 2015, 'Reclaiming the Concepts of Value and Capital', *Journal of East-West Thought*, 2, no. 5: 19–28.

- Schweickart, David 1993, *Against Capitalism*, Cambridge: Cambridge University Press.
- Schweickart, David 2006, 'Nonsense on Stilts: Michael Albert's Parecon', <http://dschwebsites.luc.edu/parecon.pdf>, accessed 7 April 2020.
- Schweickart, David 2011, *After Capitalism*, second edition, Lanham, MD: Rowman & Littlefield.
- Shoikhedbrod, Igor 2019, *Revisiting Marx's Critique of Liberalism: Rethinking Justice, Legality and Right*, New York: Palgrave Macmillan.
- Shrader-Frechett, Kristin 1991, *Risk and Rationality: Philosophical Foundations for Populist Reforms*, Berkeley: University of California Press.
- Smith, Adam 1976, *An Inquiry into the Nature and Causes of the Wealth of Nations*, Oxford: Clarendon Press.
- Smith, John 2016, *Imperialism in the Twenty-First Century: Globalisation, Super-Exploitation, and Capitalism's Final Crisis*, New York: Monthly Review Press.
- Smith, Richard 2016, *Green Capitalism: The God That Failed*, Rickmansworth: College Publications.
- Smith, Tony 1990, *The Logic of Marx's Capital: Replies to Hegelian Criticisms*, Albany: State University of New York Press.
- Smith, Tony 1995, 'The Case Against Free Market Environmentalism', *Journal of Agricultural and Environmental Ethics*, 8, no. 2: 126–45.
- Smith, Tony 1998, 'The Capital-Consumer Relation in Lean Production: The Continued Relevance of Volume Two of *Capital*', in *The Circulation of Capital: Essays on Volume II of Marx's 'Capital'*, edited by Christopher Arthur and Geert Reuten, New York: St. Martin's Press.
- Smith, Tony 2000, *Technology and Capital in the Age of Lean Production: A Marxian Critique of the 'New Economy'*, Albany: State University of New York Press.
- Smith, Tony 2014, 'Hegel, Marx, and the Comprehension of Capitalism', in *Hegel's Logic and Marx's Capital: A Reexamination*, edited by Fred Moseley and Tony Smith, Leiden: Brill.
- Smith, Tony 2017a, *Beyond Liberal Egalitarianism: Marx and Normative Social Theory in the Twenty-First Century*, Leiden: Brill.
- Smith, Tony 2017b, 'The Role of Debt in the Contemporary Global Economy', in *The Social Ontology of Capital*, edited by Dan Krier and Mark Worrell, New York: Palgrave.
- Smith, Tony 2018a, 'Beyond Extreme Monetary Policy ... and Towards Twenty-First Century Socialism?' *Radical Philosophy Review*, 21, no. 1: 31–51.
- Smith, Tony 2018b, 'How Not to Go Beyond Marx', *Critical Sociology*, 44, no. 2: 241–57.
- Smith, Tony 2020a, 'Socialism Today (... And Tomorrow)', in *An Inheritance for Our Times: Principles and Politics of Democratic Socialism*, edited by Gregory Smulewicz-Zucker and Michael Thompson, New York: o/r Books.

- Smith, Tony 2020b, 'Marx's Hegelian Critique of Hegel', *Philosophica* [Lisbon] 54: 11–32.
- Soper, Kate 2020, *Post-Growth Living: For an Alternative Hedonism*, New York: Verso.
- Sprothen, Vera 2016, 'Trading Tech Accelerates Toward Speed of Light', *Wall Street Journal*, 8 August. <https://www.wsj.com/articles/trading-tech-accelerates-toward-speed-of-light-1470559173>.
- Srnicek, Nick, and Alex Williams 2015, *Inventing the Future: Postcapitalism and a World Without Work*, New York: Verso.
- Stoner, Alexander 2014, 'Sociobiophysicality and the Necessity of Critical Theory: Moving beyond Prevailing Conceptions of Environmental Sociology in the USA', *Critical Sociology*, 40, no. 4: 621–42.
- Sundgren, Mats, Elof Dimenäs, Jan-Eric Gustafsson, and Marcus Selart 2005, 'Drivers of Organisational Creativity in Pharmaceutical R&D', *R&D Management*, 35, no. 4: 359–74.
- Thomas, Peter 2009, *The Gramscian Moment: Philosophy, Hegemony, and Marxism*, Leiden: Brill.
- Thompson, Michael J. 2018a, 'A Theory of Council Republicanism', in *Council Democracy: Towards a Democratic Socialist Politics*, edited by James Muldoon, London: Routledge.
- Thompson, Michael J. 2018b, 'The Two Faces of Domination in Republican Political Theory', *European Journal of Political Theory*, 17, no. 1: 44–64.
- Thompson, Michael J. 2020, 'The Three Spheres of Democratic Socialism', in *An Inheritance for Our Times: Principles and Politics of Democratic Socialism*, edited by Gregory Smulewicz-Zucker and Michael Thompson, New York: O/R Books.
- Tooze, Adam 2022, 'Welcome to the World of the Polycrisis', *Financial Times*, 28 October. <https://www.ft.com/content/498398e7-11b1-494b-9cd3-6d669dc3de33>.
- Toporowski, Jan 2000, *The End of Finance: The Theory of Capital Market Inflation, Financial Derivatives and Pension Fund Capitalism*, New York: Routledge.
- Toscano, Alberto 2014, 'Lineaments of the Logistical State', *Viewpoint Magazine*, 28 September. <https://viewpointmag.com/2014/09/28/lineaments-of-the-logistical-state/>.
- Toussaint, Eric 1999, *Your Money or Your Life! The Tyranny of Global Finance*, London: Pluto Press.
- Tremblay-Pepin, Simon 2022, 'Five Criteria to Evaluate Democratic Economic Planning Models', *Review of Radical Political Economics*, 54, no. 3: 265–80.
- Trotsky, Leon 1938, *The Transitional Program*. <https://www.marxists.org/archive/trotsky/1938/tp/>.
- Van Deelen, Grace 2024, 'How Public Universities Hooked America on Meat', *Vox*, <https://www.vox.com/future-perfect/357195/land-grant-universities-greenwashing-climate-methane-factory-farming>.
- Von Hippel, Eric 2005, *Democratising Innovation*, Cambridge, MA: MIT Press.

- Wackernagel, Mathis, and Bert Beyers 2019, *Ecological Footprint: Managing our Biocapacity Budget*, Gabriola Island, Canada: New Society Publishers.
- Wark, McKenzie 2019, *Capital is Dead: Is This Something Worse?* New York: Verso.
- Weber, Isabella 2021, *How China Escaped Shock Therapy: The Market Reform Debate*, New York: Routledge.
- Westphal, Kenneth 2019, *Hegel's Civic Republicanism: Integrating Natural Law with Kant's Moral Constructivism*, New York: Routledge.
- Westra, Richard 2012, *The Evil Axis of Finance*, Atlanta, GA: Clarity Press.
- Westra, Richard 2018, *Socialism in the 21st Century*, Hauppauge, NY: Nova Science Publishers.
- Whyte, Jessica 2020, 'Calculation and Conflict', *South Atlantic Quarterly*, 119, no. 1: 31–51.
- Wilkinson, Richard, and K. Pickett 2010, *The Spirit Level: Why More Equal Societies Almost Always Do Better*, New York: Penguin.
- Wolf, Martin 2008, *Fixing Global Finance*, Baltimore, MD: Johns Hopkins University Press.
- Wolf, Martin 2022a, 'The Market can Deliver the Green Transition – Just Not Fast Enough', *Financial Times*, 22 November. <https://www.ft.com/content/33ca0d1b-6173-4ce1-a072-a8d3cob492be>.
- Wolf, Martin 2022b, 'How to Think About Policy in a Polycrisis', *Financial Times*, 29 November. <https://www.ft.com/content/a1918fec-2c8f-4051-ad78-c300b0fc9adb>.
- Wolf, Martin 2022c, 'The Optimists were Right and can be So Again', *Financial Times*, 13 December. <https://www.ft.com/content/e688f058-089c-4aff-a3c1-da830c354827>.
- Wolf, Martin 2023a, *The Crisis of Democratic Capitalism*, New York: Penguin.
- Wolf, Martin 2023b, 'Developing Countries have Hit the Financial Wall', *Financial Times*, 13 June. <https://www.ft.com/content/3bd28362-c006-44c3-9f7f-a89a78452600>.
- Wolff, Richard 2012, *Democracy at Work: A Cure for Capitalism*, Chicago: Haymarket.
- Wood, Ellen Meiksins 2002, *The Origin of Capitalism: A Longer View*, London: Verso.
- Wood, Ellen Meiksins 2005, *Empire of Capital*, New York: Verso.
- Woodward, Bob 2000, *Maestro: Greenspan's Fed and the American Boom*, New York: Simon & Schuster.
- World Inequality Report 2018*, New York: UNESCO Inclusive Policy Lab. <https://wir2018.wid.world/>.
- World Population Review 2024, 'Doctors Per Capita by Country', <https://worldpopulationreview.com/country-rankings/doctors-per-capita-by-country>.
- Wray, L. Randall 2012, *Modern Money Theory*, New York: Palgrave Macmillan.
- Wright, Erik Olin 2010, *Envisioning Real Utopias*, New York: Verso.
- Zittrain, Jonathan 2008, *The Future of the Internet – and How to Stop It*, New Haven, CT: Yale University Press.

Index

- accounting in socialism 26, 221–23, 224, 241*n*2, 303–10, 226, 296–97
- Adler, Paul 200*n*40, 271*n*42
- agencies
- for technical support 146, 176, 179*n*14, 179*n*16, 237, 331*n*, 371–72
 - for well-being 241*n*2, 275–76, 305*n*15, 325–26, 370–71
- alternative hedonism 161, 437, 456
- automation 257–8
- Benkler, Yochai 438–45
- Bernes, Jasper 264*n*32
- capital
- emergence in market societies 15–16, 124*n*7, 230, 286, 288, 463–66
 - Marx's concept of 44–54, 61–5
 - standard view of 30–43, 109–10, 113
 - and wage labour 54–65, 93–97, 446–47, 450, 466, 470–71
- care labour 274*n*51, 278, 398–399
- Caren, Joseph 301–02
- centralization/decentralization 254–55, 318–19, 381–82, 409–16
- China 10–12, 73, 91, 94, 107*n*54, 196
- Citizen Service Collectives 273
- Cockshott, Paul, and Allen Cottrell 26*n*42, 219*n*59
- Cohen, G.A. 271*n*44, 301
- commons 146–47, 161–62, 355*n*9
- commons-based peer production 27, 438–44, 459–60
- limits in capitalism 445–54
 - see also* realm of freedom
- Community Activist Groups 130*n*22, 139, 140, 175–76, 182, 325, 345
- Community Associations 174–75, 177–81, 183–84, 189–90, 325, 345, 345–46, 473–4
- constitution (socialist)
- adoption of 132–134
 - basis for 23, 122–3, 165–66
 - modification of 135
- consumer sovereignty 42, 450–51
- credit 68–72, 90, 102–03, 105–07, 114*n*63, 390–91, 471
- debt trap 74*n*76
- democracy, organisational forms of 129–32, 139–40, 182–83, 231, 242–43, 427, 474–76
- Democratic Assemblies 133–34, 171–4, 181–82, 225*n*, 262–68, 326, 334, 346
- developmental state 88–9, 194–95
- Devine, Jim 24*n*, 200*n*40, 226*n*66, 229*n*71, 287*n*
- dissociated sociality 44, 169, 227, 286–91, 463
- absence of in socialism 288–91
- economic nationalism 116–17
- education 155–56
- efficiency in socialism 409–31
- emergent materialism 50–1, 123
- Engels, Frederick 21, 103
- environmental costs 74–5, 92*n*24, 203, 204, 207–09, 214–16, 221, 388–89, 420–21
- see also* solidarity constraints, second
- equality 31, 42, 62, 335
- see also* rights in socialism
- exploitation 93–96
- fetishism 53–54, 111
- financial crises 67–72, 102–03, 111–12
- financialisation 102–112
- freedom
- in capitalism 4, 30–1, 42, 62
 - in socialism 126–29, 144, 147–50, 280
 - see also* realm of freedom, rights in socialism
- geopolitical conflict 391–95
- Gramsci, Antonio 173*n*9
- Habermas, Jürgen 125*n*10
- Hägglund, Martin 118–19
- Hahnel, Robin 26*n*42, *n*43, 193, 272*n*46
- hard budget constraints 10, 263–66
- Hayek, Friederich 16, 198, 211, 246, 308
- Hegel, G.W.F. 11, 20, 56*n*37, 57*n*40, 148

- Hobbes, Thomas 3, 34, 35
 Hudis, Peter 217*n*55, 272*n*45
- incentives in socialism 266–74, 396–409
 innovation
 in capitalism 4, 32–3, 48, 59–60, 80–8,
 94, 118, 467–70
 in socialism 179, 265*n*34, 335–39, 426,
 480–1
 see also Research Centres
 innovation systems 316–18, 335–38, 374–77,
 380–88
 intangible assets 345*n*
 intellectual property rights 39*n*14, 97–102,
 115, 447–49, 471
 internationalism 128–29, 134–35, 342–49
- Judicial System 147, 177, 373–74
- Kant, Immanuel 4, 129, 138
 Kornai, János 15*n*25, 229*n*71, 264, 287*n*,
 415
- Laibman, David 22, 224*n*
 Leibowitz, Mike 230*n*75, 396, 403, 414–15
 Locke, John 3, 35–6
 Luxemburg, Rosa 12*n*18, 69
- market failures 37–9
 market socialism 14–16, 19, 145*n*39, 227–21,
 246, 472, 477
 Marx, Karl 14*n*24, 19–20, 77–8, 148
 concept of capital 45–54, 61–5, 77–78
 environmentalism of 160*n*57
 social ontology of 51
 methodological framework 56*n*37
 normative theorist 23–24, 120–24
 theory of cycles 90–1
- media
 In capitalism 95, 116, 136, 137, 189, 451–53
 in socialism 137–38, 182, 457–58
- Mészáros, István 119*n*, 126*n*, 199*n*38, 226*n*65
 Modern Monetary Theory (MMT) 481–84
 money
 in capitalism 45–49, 68–71, 104–07, 111,
 287–88, 464–65
 in socialism 26, 293–97, 309–10, 477–79
 in standard view 33–4
 and universal exchangeability 45*n*23
- see also* credit, financial crisis, Social
 Transaction Centre
- Moseley, Fred 15*n*26, 219*n*58
- nationality 341
 National Planning Board 384–85
 needs
 and capabilities 150–51, 185–86
 in capitalism 185–89
 democratic determination of 177–84,
 324–26, 345–47, 473–75
 particular 156–58, 178, 188–90, 270, 278–
 81, 398
 universal₁ 152–53, 177, 185, 275–6
 universal₂ 153–56, 177, 185–88, 275–7
- networks of production 44*n*22, 100, 200–01,
 223, 315–19, 329–34
 normative individualism 124
 Nussbaum, Martha 125*n*10, 151
- opportunity costs 203, 204, 206–07, 212–13,
 221–22, 224, 420
 overaccumulation 65–6, 70, 87–8, 90, 104,
 108, 110, 112, 469
 overexertion phase 90, 102–03, 114, 115, 118
- parecon (“participatory economics”) 193,
 272*n*46
- Paris Commune 11, 20, 130*n*24, 168*n*, 172
 particularity, right to 148, 188
 parties in socialism 172–73
 planning
 central 9–11
 comprehensive 12, 16
 indicative 194–96, 231–33, 239, 247–48,
 252, 338, 386
 and national innovation system 380–
 386
 overlapping phases of 350–52
- Platenkamp, Tim 22*n*35, 26
 Porto Alegre 184
 Poulantzas, Nicos 171*n*4
 prices, socialist
 contrast with capitalist prices 204–
 05, 209, 211, 212–27, 232, 256, 308–11,
 478
 determination of 214–21, 281*n*, 284–85,
 478
 and efficiency 417–26

- Producer Review Boards 236–38, 248, 326
 Production Collectives
 Advisory Boards 200
 annual review of 250–52, 263
 members income 212, 217–18, 259–60,
 271–72, 402–03, 406, 421–22
 planning process in 197
 production process in 253–56
 self-governance in 199–201, 253–60,
 262–3, 455
 property-owning democracy 14–16, 19,
 145*n*39, 230*n*74
 property rights 144
 public safety
 domestic 372–74
 foreign power 391–95
 public sphere 451–53, 457–58

 Rawls, John 16*n*, 230*n*74
 realm of freedom 27, 164–65, 210, 250*n*13,
 269, 423–24, 432–37, 454–56, 486–87
 see also commons-based peer production
 realm of necessity 24, 163–64, 218, 250*n*13,
 269, 274*n*51, 294, 423–24, 485–86
 republicanism
 liberal democratic 2–8, 37–43, 52–4, 96,
 113, 145*n*39, 188–9
 typology of 3–8, 35–43, 127
 and socialism 18, 22–23
 Research Centres 176, 179*n*17, 251–52, 337,
 366, 376, 387, 430, 481
 with specialization in environmental
 sciences 208–09, 215, 348, 365
 measuring of direct and indirect labour
 times 218
 retained earnings, absence of 227–31, 297–
 99
 Reuten, Geert 14*n*23, 69*n*67, 90*n*18,
 172*n*8
 rights in socialism 135–38, 147–50, 156–57,
 162–63, 166, 188–89
 Roubini, Nouriel 2

 Saros, Daniel 24*n*, 26*n*43, 190–93
 Schweickart, David 25*n*41, 26*n*42, 26*n*44,
 59*n*43, 299–301
 science juries 377–80
 Sector Agencies 176, 200, 218, 222, 234–38,
 248, 251–52, 326, 330–31, 347, 368–70

 self-governance
 and deliberation in 130–1
 organizational forms of 129–32, 139–
 40
 and rights 135–37
 scope of 142–44
 see also Production Collectives, rights in
 socialism
 Smith, Adam 32, 47
 Sober, Kate 161, 456
 social bequest 276–77
 social democracy 6, 37–42, 52, 113, 114
 see also republicanism (typology of)
 Social Investment Centres 176, 327–28, 331–
 34, 348–52, 476–77, 480
 allocation process of 248–50
 criteria for decisions of 239–44
 selection of members 244–46
 socialist calculation debate 198*n*35, 422*n*15
 socialist pluralism 408
 Social Transaction Centre 177, 279, 285–86,
 295–97, 306, 352, 353–56, 362, 481–
 85
 solidarity constraints 180, 319–24, 328,
 479
 first (investment) 159, 356–61
 second (environment) 160, 225, 388–
 89
 in regional production 319, 324
 state (capitalist)
 limits of reform in 7–8, 17–18, 76–7, 96,
 99, 466, 470
 and market failures 39–41
 state socialism 9–13, 141, 192, 364*n*12
 subsidiarity, principle of 141, 247, 321–2,
 325, 365, 367, 412
 surveillance capitalism 189, 456

 time
 costs to workers 203, 204–05, 209–11,
 216–19, 221, 420–1
 politics of 27, 61, 164–65, 225, 269–70,
 366, 399, 423–24, 433–35
 see also realm of necessity, realm of free-
 dom
 Tooze, Adam 2
 Toussaint, Eric 74*n*76
 trade with capitalist territories 389–91
 transition to socialism 119*n*, 172*n*7, 487–96

uneven development	72–4, 100–01, 359, 360, 453–54	Westra, Richard	17, 89, 117, 355, 358
		Wolf, Martin	1–2, 5, 6
value	45–6, 51, 53, 114, 116, 287–88, 289, 292–93, 310	Wright, Eric Olin	491
		zombie capitals	108, 117